

ANNUAL REPORT
OF
OCEANOGRAPHIC OBSERVATIONS

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海 洋 調 查 年 報

VOLUME 13

1 9 6 4

國 立 水 產 振 興 院

Fisheries Research and Development Agency

The Republic of Korea

Pusan, Korea

February, 1965

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凡 例

時 刻 : 大韓民國 標準時 (東經 135度) 임.

水 溫 : 攝氏度數 (°C) 이며 示度는 百分之壹임.

鹽 分 : 千分率 (‰) 로 表示됨.

水 深 : m 法으로 表示됨.

透 明 度 : 透明度板에 依한 測定値로써 m 法으로 表示됨.

水 色 : Forel 水色標準液의 水色番號 (1~11) 임.

波 浪 : 10階級法 (0~9) 에 依함.

굽 니 : 4階級法 (0~3) 에 依함. 波高는 0 = 0 m, 1 = 2 m未滿, 2 = 2 ~ 4 m
3 = 4 m以上

氣 溫 : 攝氏度數 (°C) 이며 示度는 拾分之壹임.

氣 壓 : Aneroid 氣壓計에 依한 觀測値이며 mm 로 表示됨.

風 : 風向은 16方位法 (磁針方位) 에 依함.

風力은 Beaufort 風力階級에 依함.

雲 : 雲形은 十種 雲形法에 依함.

雲量은 天空의 十等分法에 依함.

天 氣 : 快晴 (B) = 雲量 0~2, 晴 (BC) = 雲量 3~7, 曇 (C) = 雲量 8~10, 雨
(R), 霧 (F), 雪 (S) 등으로 區分됨.

浮游生物 : “+” 標는 浮游生物이 存在한다는 表示임.

EXPLANATIONS

Time	: Korean Standard Time used the mean solar time referred to the meridian of 135° E.
Water Temperature	: Recorded in hundredths of a degree in Centigrade.
Salinity	: Expressed in parts per thousandth, determined by the Kundsén method.
Depth	: Expressed in meters determined by the wire length and its angle.
Transparency	: Expressed in meters determined by the Secchi disk.
Color of the sea	: Recorded in numbers of Forel Scale.
Wind Wave	: Expressed in the scale (0~9).
Swell	: Expressed in the scale (0~3). The scale and the wave height are as follows: 0 = 0 m, 1 = less than 2 m, 2 = 2~4 m, 3 = greater than 4 m.
Air Temperature	: Recorded in tenths of a degree in Centigrade.
Atmospheric Pressure	: Recorded in mm obtained from the direct reading of Aneroid Barometers.
Wind Direction	: Given in 16 point scale of the compass bearing.
Wind Velocity	: Given in Beaufort Scale.
Cloud Type	: Recorded in ten types of cloud.
Cloud Cover	: Expressed in tenths of the whole sky covered.
Weather	: Recorded in present weather. The weather and the cloud cover are as follows: B = 0~2, BC = 3~7, C = 8~10.
Plankton	: "+" indicates the existence of plankton organisms.

제 1 편

연안정지해양관측성적



PART 1

COASTAL OCEANOGRAPHIC OBSERVATIONS

1964

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연안정지 해양관측점 위치표

Position of the Shore Stations.

해역 Region	번호 No.	관측지명 Name of station	위치 Location		관측회수 Frequency of Observations	관측개시년 Date of Inauguration
			북위 Lat. (N)	동경 Long. (E)		
동해안 East Coast	①	주문진 Chumunjin	37°53'15"	128°50'00"	매일 Daily*	1952. 8
	②	울릉도 Ulneung-Do	37°29'00"	130°54'35"	매일 Daily*	1931. 11
	③	죽변 Chukbyonman	37°03'28"	129°26'00"	매일 Daily*	1916. 7
	④	포항 Pohang	36°02'56"	129°26'10"	매일 Daily*	1946. 7
	⑤	장기갑 Changgigap	36°04'35"	129°34'30"	매일 Daily*	1916. 7
	⑥	울기 Ulgi	35°29'28"	129°26'50"	매일 Daily*	1939. 1
남해안 South Coast	⑦	부산 Pusan	35°05'08"	129°02'07"	매일 Daily*	1925. 3
	⑧	가덕도 Kadok-Do	34°59'20"	128°49'50"	매일 Daily*	1930. 1
	⑨	여수 Yosü	34°44'00"	128°44'00"	매일 Daily*	1921. 1
	⑩	소리도 Sori-Do	34°24'15"	127°48'15"	매일 Daily*	1928. 4
	⑪	거도 Komun-Do	34°00'30"	127°19'15"	매일 Daily*	1916. 7
	⑫	차지도 Chaji-Do	34°05'20"	126°36'15"	매일 Daily*	1928. 4
	⑬	산지 Sanji	33°31'10"	126°33'00"	매일 Daily*	1923. 10
	⑭	서기포 Sogwipo	33°13'30"	126°34'45"	매일 Daily*	1963. 1
서해안 West Coast	⑮	마라도 Mara-Do	33°06'45"	126°16'20"	매일 Daily*	1923. 10
	⑯	죽도 Chuk-Do	34°13'30"	125°51'00"	매일 Daily*	1916. 7
	⑰	흑산도 Huksan-Do	34°05'30"	125°06'15"	매일 Daily*	1925. 10
	⑱	홍도 Hong-Do	34°42'30"	125°13'00"	매일 Daily*	1933. 1
	⑲	목포 Mokpo	34°46'40"	126°23'05"	매일 Daily*	1928. 8
	㉑	군산 Kunsan	35°59'15"	126°43'00"	매일 Daily*	1939. 4
	㉒	어청도 Ochong-Do	36°06'40"	125°59'15"	매일 Daily*	1916. 7
	㉓	격렬비도 Kyognyolbi-Do	36°37'15"	125°33'20"	매일 Daily*	1916. 7
	㉔	부도 Pu-Do	37°08'40"	126°21'00"	매일 Daily*	1926. 1

* 매일 오전 10시 관측
At 10 a.m. everywhere.

1. 연안정지 월별 표면수온

Surface Water Temperatures at the Shore Stations.

월 Month	관측지명 Station 순 Ten day	① 주 문 진 Chumun jin	② 울 능 도 Ulleung- Do	③ 죽 변 Chuk- byon	④ 포 항 Pohang	⑤ 장 기 갑 Changgigap	⑥ 울 기 Ulgi	⑦ 부 산 Pusan
1 월 Jan.	상 순 1st	6.81	—	—	8.10	9.22	9.27	12.09
	중 순 2nd	6.71	—	—	8.40	11.00	10.20	13.34
	하 순 3rd	5.22	—	—	7.45	9.66	9.42	12.53
	월평균 Mean	6.25	—	—	7.98	9.96	9.29	12.65
2 월 Feb.	상 순 1st	4.44	—	—	6.87	9.77	7.24	11.83
	중 순 2nd	3.38	—	—	6.50	8.97	4.27	10.90
	하 순 3rd	3.19	—	—	6.67	9.97	7.59	11.18
	월평균 Mean	3.67	—	—	6.68	9.56	6.36	11.30
3 월 Mar.	상 순 1st	4.31	9.83	—	7.98	10.14	15.24	11.52
	중 순 2nd	4.69	10.06	—	8.57	10.46	10.98	11.78
	하 순 3rd	5.50	10.90	—	8.39	11.06	11.26	11.73
	월평균 Mean	4.83	10.26	—	8.31	10.55	12.49	11.68
4 월 Apr.	상 순 1st	—	9.78	—	10.22	12.37	10.45	12.84
	중 순 2nd	—	10.64	—	10.98	14.25	13.89	13.78
	하 순 3rd	—	10.97	—	12.69	15.90	15.31	14.60
	월평균 Mean	—	10.46	—	11.29	14.17	13.22	13.74
5 월 May	상 순 1st	10.27	13.38	—	14.86	17.09	18.43	16.47
	중 순 2nd	12.38	13.62	—	17.01	18.01	20.63	16.82
	하 순 3rd	15.07	14.94	—	17.86	18.91	23.88	17.70
	월평균 Mean	12.37	13.98	—	16.58	18.03	20.98	16.99
6 월 Jun.	상 순 1st	16.06	21.68	15.17	16.64	19.26	21.16	18.11
	중 순 2nd	15.03	21.74	17.60	19.90	21.12	22.28	19.21
	하 순 3rd	18.52	21.27	17.10	20.17	21.62	23.74	19.82
	월평균 Mean	16.54	21.56	16.62	18.93	20.70	22.39	19.05
7 월 Jul.	상 순 1st	20.29	21.58	—	16.56	23.26	19.73	20.71
	중 순 2nd	20.69	23.48	—	19.86	23.34	22.60	19.06
	하 순 3rd	21.51	24.09	—	21.18	22.44	29.56	22.78
	월평균 Mean	20.83	23.05	—	19.20	23.01	23.96	20.85
8 월 Aug.	상 순 1st	23.28	25.04	20.75	21.27	22.63	26.98	24.71
	중 순 2nd	24.68	25.16	20.40	20.88	23.15	28.42	25.11
	하 순 3rd	23.74	25.94	22.14	24.37	23.85	30.41	26.36
	월평균 Mean	23.88	25.38	21.09	22.40	23.21	28.68	25.39
9 월 Sep.	상 순 1st	21.60	26.16	22.75	24.23	24.33	27.98	25.50
	중 순 2nd	20.87	25.93	20.85	22.35	22.93	28.92	25.22
	하 순 3rd	19.77	24.62	19.83	19.37	21.75	28.92	23.83
	월평균 Mean	20.78	25.57	21.14	21.98	23.00	28.61	24.80
10월 Oct.	상 순 1st	18.80	—	18.25	18.67	17.60	28.05	22.64
	중 순 2nd	18.25	10.95	17.93	17.77	17.03	27.82	21.77
	하 순 3rd	16.70	—	16.98	16.19	14.27	24.52	19.49
	월평균 Mean	17.95	—	17.72	17.54	16.30	26.79	21.30
11월 Nov.	상 순 1st	—	21.94	15.6	15.25	11.16	23.62	17.77
	중 순 2nd	—	19.15	13.85	11.61	9.25	22.92	16.25
	하 순 3rd	—	18.25	12.41	10.28	8.20	18.15	14.30
	월평균 Mean	—	19.78	13.97	12.34	9.77	21.56	16.11
12월 Dec.	상 순 1st	—	18.17	11.07	7.95	4.66	18.00	12.73
	중 순 2nd	—	17.73	11.43	8.10	9.32	16.73	12.31
	하 순 3rd	—	16.34	11.12	9.45	9.37	13.77	12.72
	월평균 Mean	—	17.41	11.21	8.50	7.78	16.17	12.59
년 Year	월 평 균 Mean	13.42	17.47	14.12	14.39	13.84	19.99	17.20

월 Month	관측지명 Station		(8) 가 덕 도	(9) 여 수	(10) 소 리 도	(11) 거 문 도	(12) 자 지 도	(13) 산 지	(14) 서 귀 포
	순 Ten day		Kadok-Do	Yosu	Sori-Do	Komun-Do	Chaji-Do	Sanji	Sogwipo
1 월 Jan.	상	순 1st	13.30	7.15	11.68	15.27	13.27	14.49	16.43
	중	순 2nd	12.45	7.08	11.80	14.14	13.37	13.96	16.35
	하	순 3rd	11.63	6.03	12.02	14.31	11.93	13.36	16.54
	월평균	Mean	12.48	6.75	11.83	14.57	12.86	13.94	16.44
2 월 Feb.	상	순 1st	11.21	5.92	8.93	13.57	12.08	13.31	15.62
	중	순 2nd	10.55	5.52	9.50	12.71	11.58	12.81	15.00
	하	순 3rd	10.04	6.02	9.73	11.28	11.83	12.09	14.64
	월평균	Mean	10.62	5.82	9.38	12.52	11.83	12.53	15.09
3 월 Mar.	상	순 1st	9.70	7.31	11.87	11.71	12.82	12.88	15.02
	중	순 2nd	10.10	8.61	11.84	12.52	14.08	13.16	15.03
	하	순 3rd	10.63	9.22	11.29	12.54	12.12	13.85	14.76
	월평균	Mean	10.14	8.38	11.67	12.26	13.01	13.29	14.94
4 월 Apr.	상	순 1st	12.74	11.15	11.76	12.88	12.83	14.65	14.93
	중	순 2nd	13.55	13.46	13.86	13.14	13.98	14.33	15.57
	하	순 3rd	14.45	13.85	14.28	14.57	14.71	15.00	15.93
	월평균	Mean	13.58	12.82	13.30	13.53	13.83	14.66	15.48
5 월 May	상	순 1st	14.75	14.61	14.87	14.04	15.10	15.90	17.12
	중	순 2nd	15.12	17.46	16.03	14.23	15.30	16.57	18.04
	하	순 3rd	15.78	19.05	17.32	15.55	15.75	17.29	19.19
	월평균	Mean	15.22	17.04	16.07	14.61	15.38	16.59	18.12
6 월 Jun.	상	순 1st	16.32	19.95	18.40	14.11	16.10	18.04	18.95
	중	순 2nd	18.40	20.28	18.56	14.57	17.61	19.20	19.08
	하	순 3rd	20.05	22.14	20.70	15.26	17.90	20.58	19.62
	월평균	Mean	18.26	20.79	19.22	14.65	17.20	19.27	19.22
7 월 Jul.	상	순 1st	19.84	23.74	21.41	16.36	17.95	22.01	20.41
	중	순 2nd	20.79	24.34	21.67	18.74	18.00	23.57	21.56
	하	순 3rd	21.77	24.46	22.76	22.66	17.64	24.68	26.37
	월평균	Mean	20.80	24.20	21.95	19.25	17.86	23.42	22.78
8 월 Aug.	상	순 1st	22.79	—	24.95	24.61	19.28	26.60	25.53
	중	순 2nd	23.35	—	25.72	25.21	22.59	26.99	26.76
	하	순 3rd	23.29	—	26.85	25.25	24.11	26.69	27.71
	월평균	Mean	23.14	—	25.84	25.05	21.99	26.76	26.67
9 월 Sep.	상	순 1st	22.31	27.10	26.89	25.43	23.39	25.81	26.60
	중	순 2nd	21.36	25.44	25.40	25.74	19.32	23.33	26.45
	하	순 3rd	20.51	22.86	24.17	23.34	18.15	22.33	24.68
	월평균	Mean	21.39	25.13	25.49	24.83	20.29	24.19	25.91
10월 Oct.	상	순 1st	19.36	21.67	22.72	22.81	17.87	20.96	23.85
	중	순 2nd	18.56	20.24	21.08	21.91	17.82	19.70	23.19
	하	순 3rd	18.15	19.25	19.28	20.14	17.51	18.92	21.30
	월평균	Mean	18.69	20.39	21.03	21.62	17.70	19.89	22.78
11월 Nov.	상	순 1st	17.82	17.22	17.21	18.14	16.91	17.32	19.80
	중	순 2nd	16.82	14.57	15.43	15.84	14.62	16.10	18.86
	하	순 3rd	16.05	12.20	13.87	14.56	13.14	15.67	18.28
	월평균	Mean	16.89	14.66	15.50	16.18	14.89	16.36	18.98
12월 Dec.	상	순 1st	14.95	10.12	12.48	14.19	12.03	15.14	17.71
	중	순 2nd	13.96	8.27	11.38	14.70	10.81	14.61	17.41
	하	순 3rd	13.59	7.98	11.49	15.23	11.11	14.43	17.06
	월평균	Mean	14.17	8.79	11.75	14.71	11.35	14.73	17.37
년 Year	월 평 균 Mean		16.28	15.82	16.91	16.98	15.68	17.94	19.48

⑮ 마라도 Mara-Do	⑯ 죽도 Chuk-Do	⑰ 흑산도 Huksan-Do	⑱ 홍도 Hong-Do	⑲ 목포 Mokpo	⑳ 군산 Kunsan	㉑ 어청도 Ochoung-Do	㉒ 결렬비도 Kyokryolbi-Do	㉓ 부도 Pu-Do
16.31	6.54	11.60	10.59	7.72	3.53	7.58	8.16	6.51
15.83	7.94	12.24	10.30	7.25	3.78	6.96	7.75	5.77
15.65	10.46	12.31	9.04	6.61	3.50	6.15	7.20	5.65
15.93	8.31	12.05	9.95	7.19	3.60	6.93	7.70	5.98
15.30	10.46	10.81	7.63	5.84	2.89	6.45	6.27	4.72
14.56	5.42	10.24	6.64	4.29	1.98	6.19	4.52	3.78
14.46	8.61	10.36	6.45	4.49	1.61	6.33	4.57	3.24
14.77	8.16	10.47	6.91	4.87	2.16	6.32	5.12	3.91
15.42	10.14	10.35	6.35	6.79	5.00	6.58	4.12	3.44
14.43	11.91	10.62	6.42	7.92	6.24	6.02	4.40	3.72
14.45	11.12	11.30	6.51	9.21	9.62	5.87	5.21	4.63
14.77	11.57	10.76	6.43	7.97	6.95	6.16	4.59	3.93
14.47	12.89	10.93	7.46	11.64	11.23	6.24	6.21	5.74
15.67	13.80	11.60	8.04	14.67	14.65	6.81	6.92	6.88
16.64	15.11	12.83	8.72	16.51	16.26	7.71	5.21	9.34
15.62	13.70	11.79	7.17	14.27	14.05	6.92	7.11	7.32
17.09	14.79	13.09	9.98	16.72	15.56	8.48	10.36	10.63
18.09	15.61	13.87	12.06	17.82	17.68	9.15	10.75	11.35
18.95	16.80	14.58	14.25	19.51	20.50	10.14	12.53	12.81
17.71	15.79	13.85	12.09	18.02	18.28	9.26	11.25	11.59
18.77	15.04	14.76	15.31	20.19	20.28	11.68	13.18	14.32
19.23	16.44	15.16	16.61	21.05	21.61	13.14	16.51	16.05
20.36	18.53	16.08	18.88	22.48	24.24	15.23	16.33	17.13
19.45	16.67	15.33	16.93	21.24	22.04	13.35	15.34	15.83
22.55	19.76	17.89	21.55	24.09	25.58	—	20.06	18.73
24.16	20.16	20.04	22.48	24.58	25.48	—	23.28	20.12
26.86	20.40	22.67	23.73	25.76	26.87	—	24.60	22.33
24.52	20.11	20.20	22.93	24.81	26.02	—	22.65	20.39
27.68	22.39	25.10	24.08	26.51	27.85	—	24.49	23.38
28.34	23.75	26.37	24.35	26.81	27.72	—	25.08	25.05
28.10	25.04	25.18	25.90	27.26	27.42	—	25.51	25.46
28.04	23.39	25.38	23.93	26.87	27.66	—	25.03	24.63
28.14	25.24	24.57	26.09	26.75	25.70	25.81	21.43	25.32
27.14	22.25	24.08	24.90	25.55	23.69	24.42	22.53	24.47
24.40	21.33	22.61	22.13	23.44	20.88	23.58	20.87	23.27
26.56	22.91	23.75	24.37	25.25	23.43	24.94	21.61	24.53
22.72	19.95	20.69	21.21	21.30	19.81	19.18	20.14	22.07
20.96	18.56	19.73	20.27	19.75	18.58	19.95	19.34	20.47
20.45	16.96	18.87	18.25	18.23	15.66	19.28	20.49	18.95
21.38	18.11	19.76	19.85	19.76	18.01	19.77	19.99	20.49
19.67	14.62	18.44	16.30	15.91	13.13	17.17	13.77	17.06
18.76	13.43	15.53	13.76	13.98	10.78	15.92	16.38	14.81
18.84	13.69	15.03	12.73	12.51	10.54	14.61	15.01	13.14
19.09	13.91	16.33	14.26	14.43	11.48	16.10	15.05	15.00
18.64	8.61	14.84	11.93	9.74	7.27	13.60	13.25	10.43
16.95	7.93	13.87	11.38	8.43	4.94	11.28	11.45	8.79
16.57	9.39	13.09	10.58	8.30	6.27	10.05	10.52	8.36
17.39	8.64	13.90	11.28	8.82	6.13	11.64	11.74	9.19
19.60	15.10	16.13	14.67	16.04	14.98	13.86	13.93	13.56

2. 연안정지 월별 표면수비중

Surface Water Density at the Shore Stations.

월 Month	순 Ten day	부 ^⑦ 산 Pusan	서귀포 ^⑭ Sogwipo	월 Month	순 Ten day	부 ^⑦ 산 Pusan	서귀포 ^⑭ Sogwipo
1 월 Jan.	상 순 1st	25.41	25.25	7 월 Jul.	상 순 1st	24.48	24.53
	중 순 2nd	25.39	25.29		중 순 2nd	24.65	24.27
	하 순 3rd	25.32	25.57		하 순 3rd	25.15	22.70
	월평균 Mean	25.37	25.37		월평균 Mean	24.76	23.83
2 월 Feb.	상 순 1st	24.98	25.27	8 월 Aug.	상 순 1st	22.73	21.61
	중 순 2nd	24.98	25.05		중 순 2nd	23.41	21.61
	하 순 3rd	24.93	25.34		하 순 3rd	22.77	20.86
	월평균 Mean	24.96	25.22		월평균 Mean	22.97	21.36
3 월 Mar.	상 순 1st	24.91	25.34	9 월 Sep.	상 순 1st	22.69	21.87
	중 순 2nd	24.02	25.42		중 순 2nd	22.33	22.33
	하 순 3rd	24.77	25.36		하 순 3rd	22.20	22.14
	월평균 Mean	24.56	25.37		월평균 Mean	22.41	22.11
4 월 Apr.	상 순 1st	24.57	25.28	10월 Oct.	상 순 1st	22.59	24.37
	중 순 2nd	24.20	25.44		중 순 2nd	23.07	24.76
	하 순 3rd	24.20	25.38		하 순 3rd	23.74	24.23
	월평균 Mean	24.32	25.37		월평균 Mean	23.13	24.45
5 월 May	상 순 1st	22.82	25.54	11월 Nov.	상 순 1st	24.06	24.25
	중 순 2nd	24.11	25.27		중 순 2nd	24.14	24.64
	하 순 3rd	24.40	24.96		하 순 3rd	24.45	24.49
	월평균 Mean	23.78	25.26		월평균 Mean	24.22	24.46
6 월 Jun.	상 순 1st	23.83	25.32	12월 Dec.	상 순 1st	24.60	25.22
	중 순 2nd	24.66	24.51		중 순 2nd	24.59	25.12
	하 순 3rd	24.98	24.25		하 순 3rd	24.80	25.32
	월평균 Mean	24.31	24.66		월평균 Mean	24.66	24.39

제 2 편

횡 단 정 선 해 양 관 측 성 적



PART 2

SECTIONAL OCEANOGRAPHIC OBSERVATIONS

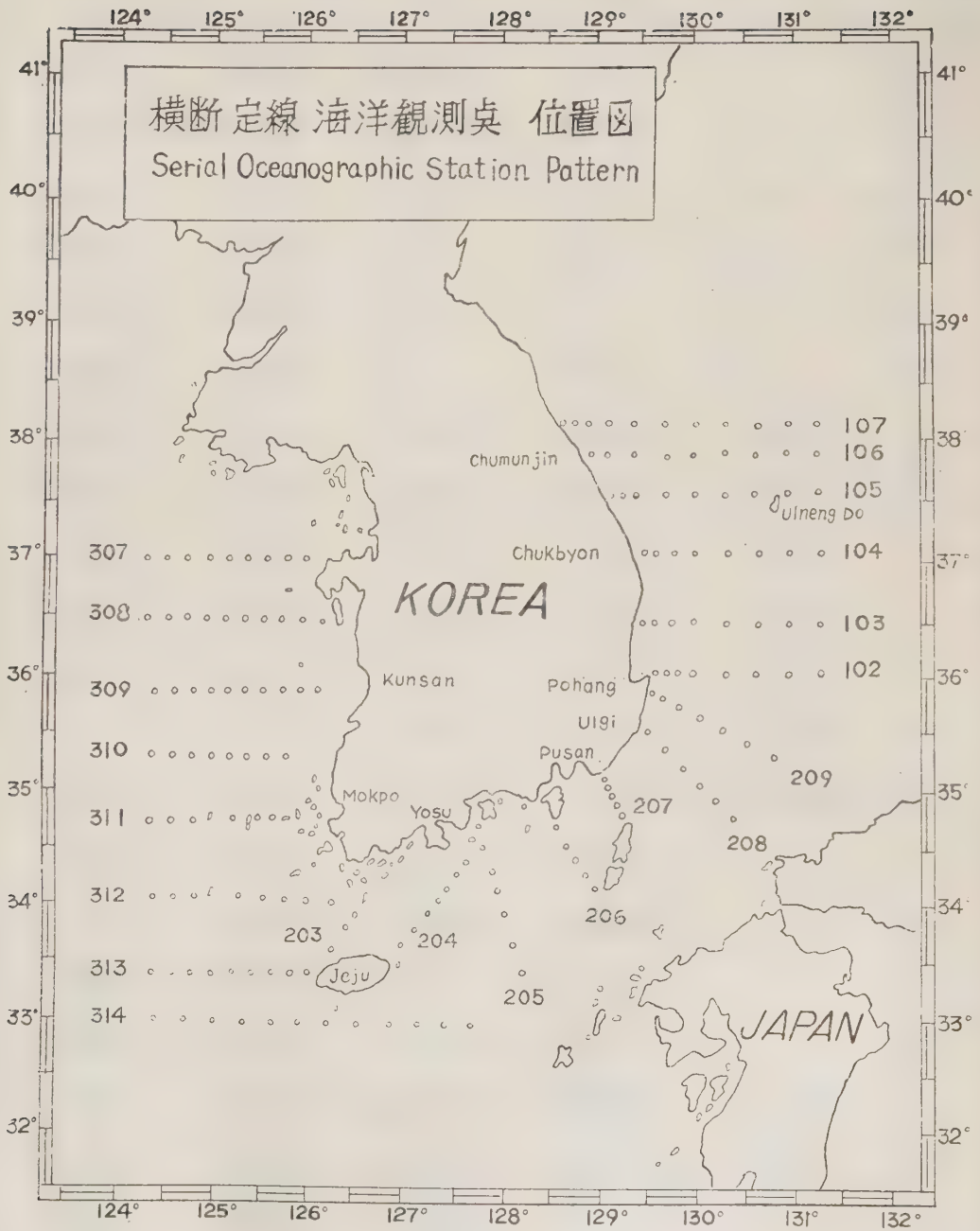
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횡단정선 해양관측점 위치표 Position of the Serial Oceanographic Stations.

Sta. No. Line	01	02	03	04	05
106		37°53' 45" 128°52' 30"	37°53' 45" 128°57' 30"	37°53' 45" 129°03' 44"	37°53' 45" 129°22' 35"
105			37°33' 10" 129°09' 48"	37°33' 10" 129°14' 45"	37°33' 10" 129°22' 15"
104				37°03' 15" 129°29' 08"	37°03' 15" 129°34' 07"
103				36°30' 00" 129°30' 30"	36°30' 00" 129°35' 33"
102				36°04' 30" 129°36' 50"	36°04' 30" 129°41' 45"
209				35°47' 20" 129°32' 45"	35°45' 25" 129°38' 10"
208	35°28' 35" 129°27' 30"	35°24' 10" 129°34' 00"	35°18' 00" 129°43' 25"	35°11' 30" 129°53' 00"	35°05' 00" 130°02' 15"
207	35°01' 30" 129°07' 20"	34°57' 45" 129°11' 25"	34°53' 58" 129°15' 20"	34°50' 12" 129°19' 30"	34°47' 57" 129°21' 55"
206	34°35' 30" 128°34' 25"	34°29' 42" 128°41' 05"	34°22' 37" 128°49' 34"	34°15' 17" 128°58' 04"	34°08' 10" 129°06' 30"
205	34°22' 45" 127°49' 05"	34°15' 18" 127°52' 30"	34°05' 50" 127°56' 55"	33°51' 40" 128°03' 00"	33°37' 40" 128°09' 05"
204	34°21' 00" 127°44' 07"	34°13' 55" 127°35' 20"	34°06' 50" 127°27' 00"	33°53' 55" 127°15' 00"	33°45' 00" 127°09' 00"
203	33°56' 32" 126°31' 20"	33°41' 23" 126°26' 25"	33°38' 20" 126°21' 20"		
314	33°00' 00" 128°00' 00"	33°00' 00" 127°42' 00"	33°00' 00" 127°24' 10"	33°00' 00" 127°06' 20"	33°00' 00" 126°48' 30"
313		33°24' 10" 125°57' 50"	33°24' 10" 125°47' 35"	33°24' 10" 125°35' 54"	33°24' 10" 125°23' 56"
312		33°58' 25" 126°05' 35"	33°59' 50" 126°53' 50"	34°01' 20" 125°41' 45"	34°02' 45" 125°30' 00"
311				34°42' 45" 125°43' 23"	34°42' 45" 125°31' 15"
310			35°20' 00" 125°48' 20"	35°20' 00" 125°36' 15"	35°20' 00" 125°24' 10"
309	35°51' 15" 126°19' 15"	35°51' 15" 126°04' 50"	35°51' 15" 125°51' 25"	35°51' 15" 125°38' 00"	35°51' 15" 125°24' 30"
308	36°19' 37" 126°14' 00"	36°19' 37" 126°01' 45"	36°19' 37" 129°49' 28"	36°19' 37" 125°37' 04"	36°19' 37" 125°24' 50"
307			36°56' 30" 126°00' 00"	36°55' 30" 125°37' 43"	36°55' 30" 125°25' 15"
306		37°16' 55" 126°00' 17"	37°16' 55" 125°50' 13"	37°16' 55" 125°37' 40"	37°16' 55" 125°25' 05"

06	07	08	09	10	11
37°53'45" 129°40'29"	37°53'45" 130°00'00"	37°53'45" 130°18'52"	37°53'45" 130°31'48"	37°53'45" 130°56'30"	37°53'45" 131°15'10"
37°33'10" 129°41'03"	37°33'10" 130°00'00"	37°33'10" 130°18'52"	37°33'10" 130°37'43"	37°33'10" 130°56'05"	37°33'10" 131°33'50"
37°03'15" 129°47'45"	37°03'15" 130°00'00"	37°03'15" 130°18'40"	37°03'15" 130°37'05"	37°03'15" 130°55'40"	37°03'15" 131°14'20"
36°30'00" 129°47'45"	36°30'00" 130°00'00"	36°30'00" 130°18'48"	36°30'00" 130°37'05"	36°30'00" 130°55'50"	36°30'00" 131°14'10"
36°04'30" 129°47'45"	36°04'03" 130°00'00"	36°04'30" 130°18'20"	36°04'30" 130°36'50"	36°04'30" 130°55'00"	36°04'30" 131°13'25"
35°41'00" 129°49'35"	35°36'50" 130°00'30"	35°30'40" 130°17'07"	35°24'30" 130°39'50"	35°18'12" 130°50'20"	35°11'58" 131°06'58"
34°58'30" 130°12'00"	34°52'00" 130°21'15"	34°45'30" 130°31'00"	34°38'00" 130°40'00"	34°32'30" 130°50'00"	
34°44'05" 129°25'55"	34°36'15" 129°35'00"	34°31'00" 129°42'00"	34°25'00" 129°48'00"	34°19'30" 129°55'00"	34°14'00" 130°01'30"
33°23'25" 128°15'30"	33°09'15" 128°21'55"	32°54'35" 128°28'05"			
33°36'05" 127°02'55"					
33°00'00" 126°30'40"	33°00'00" 126°12'50"	33°00'00" 125°54'00"	33°00'00" 125°36'10"	33°00'00" 125°18'20"	33°00'00" 125°00'00"
33°24'10" 126°11'58"	33°24'10" 125°00'00"	33°24'10" 124°48'00"	33°24'10" 124°24'06"		
34°04'15" 125°18'00"	34°05'35" 125°00'00"	124°48'00" 34°05'35"	124°24'06" 34°05'35"		
34°42'45" 125°19'18"	34°42'45" 125°00'00"	34°42'45" 124°47'45"	34°42'45" 124°35'30"		
35°20'00" 125°12'05"	35°20'00" 125°00'00"	35°20'00" 124°47'55"	35°20'00" 124°35'50"		
35°51'15" 125°12'05"	35°51'15" 125°00'00"	35°51'15" 124°47'30"	35°15'15" 124°35'00"		
36°19'37" 125°12'30"	36°19'37" 125°00'00"	36°19'37" 124°47'40"	36°19'37" 124°35'20"		
36°55'30" 125°12'40"	36°55'30" 125°00'00"	36°55'30" 124°47'30"	36°55'30" 124°35'00"		
37°16'55" 125°12'37"	37°16'55" 125°00'00"	37°16'15" 124°47'30"	37°16'55" 124°34'58"		

동 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS
EASTERN WATERS

1 9 6 4

A. 106 선 해양 관측 성적

Oceanographic Data, Line 106

Date		① July 1964					
Sta. No.		02	03	04	05	06	07
Day		15	15	15	15	15	15
Item	Time	0635	0710	0750	0945	1150	1400
	Z (m)						
T °C	0	20.10	20.20	20.50	20.60	20.30	18.70
	10	18.94	19.16	20.36	20.70	19.03	17.44
	25	11.70	9.00	8.40	8.83	7.10	15.11
	50	—	8.35	3.98	5.24	4.00	11.66
	100	—	3.42	2.66	3.07	2.28	3.28
	150	—	—	1.94	2.18	1.64	2.63
	200	—	—	1.61	1.51	1.28	1.21
	300	—	—	1.51	0.93	0.83	0.90
	Botm.	9.09	2.41	—	—	—	—
S ‰	0	—	—	—	—	—	—
	10	—	—	—	—	—	—
	25	—	—	—	—	—	—
	50	—	—	—	—	—	—
	100	—	—	—	—	—	—
	150	—	—	—	—	—	—
	200	—	—	—	—	—	—
	300	—	—	—	—	—	—
	Botm.	—	—	—	—	—	—
Depth (m)		48	105	—	—	—	—
Secchi (m)		2	5	12	15	17	11
Color		4	4	4	4	4	4
Sea		2	3	3	4	3	4
Swell		1	2	2	2	2	2
Air Temp. (°C)		19.5	20.0	20.2	21.4	20.6	19.5
Baro. (mm)		765	767	766	767	765	765
Wind		E. 2	E. 2	E. 3	E. 4	E. 3	E. 3
Cloud		Cs. 9	St. 8	St. 8	Ci. 8	Cs. 10	Ci. 10
Weather		C	C	C	C	R	R

Date		② October 1964					
Sta. No.		08	09	02	03	04	05
Day		15	15	4	4	4	4
Item	Time	1555	1745	1335	1415	1505	1705
	Z (m)						
T C	0	20.00	20.30	18.7	19.0	19.4	19.0
	10	19.52	19.97	18.77	19.00	19.00	18.97
	25	16.05	15.70	16.26	14.04	13.64	11.16
	50	14.77	14.61	—	5.44	5.33	4.16
	100	9.35	9.95	—	1.89	2.26	2.04
	150	2.11	5.70	—	1.35	1.72	1.70
	200	2.28	2.81	—	—	1.36	1.26
	300	1.58	1.21	—	—	1.12	0.75
	Botm.	—	—	0.88	1.22	—	—
S ‰	0	—	—	32.36	32.54	32.79	32.79
	10	—	—	32.81	32.63	33.69	33.75
	25	—	—	33.42	33.59	33.91	33.95
	50	—	—	—	33.78	33.95	33.95
	100	—	—	—	34.18	34.15	34.04
	150	—	—	—	34.00	34.04	34.11
	200	—	—	—	—	34.11	34.13
	300	—	—	—	—	32.72	32.72
	Botm.	—	—	33.80	32.72	—	—
Depth (m)		—	—	48	184	—	—
Secchi (m)		16	17	11	10	14	13
Color		4	4	3	3	3	3
Sea		4	3	3	3	4	4
Swell		2	2	1	1	2	2
Air Temp. (°C)		19.6	19.5	19.1	19.0	19.0	19.0
Baro. (mm)		765	764	778	777	777	777
Wind		E. 4	NE. 3	ESE. 3	SE. 3	SE. 4	S. 3
Cloud		St. 9	St. 8	As. 10	As. 10	St. 10	St. 10
Weather		R	C	C	C	C	C

B. 105 선 해양 관측 성적

Oceanographic Data, Line 105

Date		① March 1964									
Sta. No.		03	04	05	06	07	08	09	10	03	04
Day		25	25	25	25	25	25	25	26	16	16
Item	Time Z (m)	0705	0800	0945	1145	1340	1530	1725	1050	0500	0545
T °C	0	4.90	5.20	4.60	9.40	8.00	8.30	9.50	7.50	20.1	20.13
	10	5.05	5.36	6.38	9.41	8.05	8.20	9.26	9.22	19.35	18.74
	25	4.69	5.40	6.14	9.40	7.94	7.88	9.35	9.25	9.60	8.59
	50	4.00	4.45	4.42	7.48	7.82	5.93	9.35	8.76	—	4.91
	100	2.75	3.06	2.85	3.52	3.66	3.21	4.72	5.35	—	3.02
	150	—	2.45	3.09	2.32	3.37	2.07	2.73	3.08	—	2.17
	200	—	1.73	1.55	2.07	2.84	1.42	1.68	2.66	—	1.82
	300	—	—	0.92	1.06	1.33	0.87	0.90	—	—	—
	400	—	—	0.69	0.81	0.95	0.75	0.71	—	—	—
	Botm.	2.66	2.82	—	—	—	—	—	4.43	7.37	1.68
S ‰	0	34.02	34.11	34.18	34.47	34.38	34.38	34.51	34.20	27.02	25.41
	10	34.02	34.11	34.20	34.47	34.33	34.40	34.56	34.40	29.96	32.16
	22	34.11	34.11	34.16	34.20	34.34	34.22	34.56	34.40	33.68	33.77
	50	34.07	34.16	34.02	34.00	34.38	34.15	34.58	34.47	—	34.07
	100	34.05	34.93	33.98	34.00	33.62	34.09	34.09	34.16	—	34.20
	150	—	34.07	34.00	34.00	33.93	34.15	34.11	34.09	—	34.25
	200	—	34.11	34.11	34.05	34.00	34.09	34.18	34.11	—	34.25
	300	—	—	34.98	34.07	34.05	34.11	34.20	—	—	—
	400	—	—	34.47	34.11	34.02	34.11	34.16	—	—	—
	Botm.	34.04	34.09	—	—	—	—	—	34.11	34.07	34.25
Depth (m)		116	236	—	—	—	—	—	303	55	215
Secchi (m)		9	13	16	14	14	14	15	14	—	6
Color		—	4	3	3	3			4	—	4
Sea		3	4	5	6	6	6	5	6	2	2
Swell		2	2	3	3	3	3	3	3	1	2
Air Temp. (°C)		5.9	—	4.7	—	4.9	6.0	6.2	5.5	18.0	18.2
Baro. (mm)		771	771	771	771	771	771	770	771	767	767
Wind		W.3	W.3	NW.4	N.5	N.5	N.4	N.4	W.5	E.3	E.1
Cloud		Ci.4	Cs.4	Ci.3	Ci.5	Ci.3	St.3	Cs.5	St.6	Ci.6	Ci.7
Weather		BC	BC	B	BC	B	B	BC	BC	BC	BC

Date		② July 1964					③ October 1964				
Sta. No.		05	06	07	08	09	03	04	05	06	07
Day		16	16	15	15	15	3	3	3	3	3
Item	Time Z(m)	0645	0845	2400	2210	2015	1840	1750	1645	1535	1220
T °C	0	20.1	20.0	19.5	19.8	20.5	19.0	19.0	19.1	19.5	20.6
	10	20.63	17.29	19.22	19.69	19.74	17.57	18.37	19.01	19.30	19.65
	25	8.96	11.33	13.44	15.78	15.90	11.55	11.36	14.04	14.23	13.22
	50	3.88	3.89	7.69	13.73	12.50	2.91	4.24	4.73	5.67	6.74
	100	2.48	2.66	3.34	8.59	9.53	—	2.21	2.23	2.53	2.46
	150	1.87	1.79	2.54	4.44	5.90	—	1.51	1.80	2.11	1.68
	200	1.76	1.46	1.47	2.29	2.94	—	1.19	1.36	1.34	1.37
	300	1.05	0.87	1.33	1.15	1.63	—	—	0.83	0.80	0.86
Botm.		—	—	—	—	—	2.43	1.12	—	—	—
S ‰	0	26.64	34.25	34.25	34.22	34.09	32.41	32.36	32.36	32.88	32.61
	10	33.37	34.61	34.38	34.16	34.38	33.31	33.33	34.43	32.90	32.68
	25	33.91	34.25	34.89	34.78	34.78	33.60	33.68	33.40	33.59	33.78
	50	34.13	34.27	34.43	34.78	34.63	34.05	33.93	33.96	34.07	34.11
	100	34.13	34.22	34.15	34.42	34.61	—	34.07	34.04	34.04	34.05
	150	34.27	34.25	34.18	34.20	34.13	—	34.04	32.47	34.04	34.04
	200	34.27	34.25	34.25	34.16	34.07	—	34.11	34.11	34.11	34.00
	300	34.29	34.27	34.24	—	34.06	—	—	34.13	34.18	34.27
Botm.		—	—	—	—	—	34.04	34.05	—	—	—
Depth (m)		—	—	—	—	—	60	240	—	—	—
Secchi (m)		7	15	—	—	—	—	11	9	16	16
Color		4	4	—	—	—	—	3	4	3	3
Sea		3	4	3	3	3	4	4	5	4	2
Swell		2	2	2	2	2	2	2	3	2	1
Air Temp. (°C)		18.0	18.5	18.5	19.0	19.0	19.0	19.0	19.0	20.0	20.0
Baro. (mm)		768	768	767	766	766	780	780	780	781	782
Wind		E. 2	E. 3	NE. 2	NE. 3	NE. 4	SSE. 4	SSE. 4	SSE. 4	SSE. 2	SSE. 2
Cloud		St. 7	St. 7	Cl. 8	Cl. 8	St. 9	Cc. 4	Ac. 7	Ac. 10	As. 9	St. 10
Weather		BC	BC	C	C	C	BC	BC	C	C	C

			④ December 1964							
08	09	10	30	04	05	06	07	08	09	10
3	3	3	13	13	13	13	13	13	13	13
1005	0800	0550	0530	0645	0815	0955	1200	1410	1517	1816
21.5	22.6	21.1	10.90	12.10	12.20	12.80	11.30	16.10	15.40	15.70
20.43	22.43	21.20	9.05	10.31	10.42	11.77	9.92	15.40	13.80	15.35
19.42	21.62	21.08	11.11	12.24	12.12	12.76	11.09	15.97	15.26	15.77
12.11	16.54	16.94	10.53	12.33	11.21	12.39	9.98	16.04	15.32	15.72
6.10	13.61	15.14	—	4.87	4.21	3.79	2.74	14.68	15.45	15.82
2.32	8.92	10.66	—	1.70	2.09	1.66	1.43	2.62	6.17	—
1.59	3.08	—	—	1.24	1.38	1.19	1.09	1.51	2.04	—
1.02	1.11	—	—	—	0.84	0.64	0.65	0.79	0.97	—
—	—	10.14	2.18	1.00	—	—	—	—	—	10.53
32.50	32.97	32.52	33.71	33.53	33.03	33.78	34.05	33.91	34.07	34.09
32.50	32.97	32.52	33.33	33.74	33.26	34.20	33.68	33.74	33.73	33.48
32.92	33.04	33.04	33.24	33.69	33.93	34.31	33.55	33.57	33.60	33.89
33.87	34.18	34.34	33.33	33.80	34.15	34.04	33.71	33.86	33.09	33.91
34.11	34.49	34.47	—	33.84	34.15	34.22	33.59	33.84	33.73	33.73
34.05	34.33	34.47	—	33.84	34.63	33.93	33.74	33.75	33.64	—
33.98	34.04	—	—	34.31	34.65	33.89	33.95	33.75	33.87	—
34.09	33.93	—	—	—	34.83	33.89	33.78	33.86	33.73	—
—	—	34.33	33.71	34.43	—	—	—	—	—	33.87
—	—	168	112	240	—	—	—	—	—	160
15	21	—	—	—	13	17	11	15	19	—
3	2	—	—	—	—	—	—	—	—	—
2	2	3	3	3	3	3	3	4	4	3
1	1	1	1	1	1	1	1	2	2	1
19.5	19.0	18.0	1.7	1.9	3.6	4.7	4.8	7.0	8.5	7.7
782	782	781	782	782	782	782	782	780	780	781
SE.2	NE.1	NE.2	W.2	W.2	W.2	W.2	W.2	NW.3	NW.3	NW.3
St.10	Ac.9	Cu.4	Ac.2	As.9	As.9	As.9	As.9	Cu.9	Cu.8	Cu.8
R	C	BC	B	C	C	C	C	C	C	C

② July 1964					③ October 1964				
06	07	08	09	10	04	05	06	07	08
16	16	16	16	16	2	2	2	2	2
1425	1600	1800	1945	2130	0620	0720	0830	0955	1135
19.60	19.50	19.50	18.50	18.40	18.8	19.2	19.1	19.4	20.2
17.51	17.71	18.93	16.39	17.57	19.35	16.19	19.17	19.39	19.17
12.59	10.99	10.92	12.54	16.56	16.56	9.90	15.00	19.00	5.47
6.11	4.90	5.34	6.91	15.07	3.83	3.77	4.36	6.04	2.32
1.98	2.90	2.09	2.61	9.62	—	2.25	2.62	2.52	1.25
1.63	1.33	1.29	1.47	2.13	—	—	1.79	1.72	1.49
1.34	0.93	0.90	0.98	1.49	—	—	1.36	1.33	1.05
1.02	0.64	0.55	0.54	0.79	—	—	0.72	0.80	0.64
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2.75	1.51	—	—	—
—	—	—	—	—	32.25	32.16	34.02	32.48	32.61
—	—	—	—	—	34.16	32.20	34.07	32.41	32.81
—	—	—	—	—	32.99	33.69	33.04	32.99	33.15
—	—	—	—	—	33.80	33.91	33.91	33.69	33.96
—	—	—	—	—	—	33.96	33.95	33.91	34.02
—	—	—	—	—	—	—	34.04	33.98	34.04
—	—	—	—	—	—	—	34.07	34.04	34.04
—	—	—	—	—	—	—	34.09	34.04	34.04
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	33.84	34.02	—	—	—
—	—	—	—	—	66	160	—	194	—
11	15	13	—	—	8	11	14	16	13
3	4	4	—	—	4	3	3	3	3
4	5	4	5	4	2	3	3	4	4
2	2	2	2	2	1	2	2	2	2
19.5	20.6	20.2	20.0	19.8	16.5	18.9	21.5	20.0	20.0
768	767	767	767	768	782	782	782	782	782
SW.2	S.3	S.2	S.2	S.3	NNE.1	NNE.2	NNE.1	NNE.2	NE.3
Cs.8	Cc.9	Ct.8	Cc.9	St.8	Cu.5	Cu.6	Cc.7	Cs.5	As.7
C	C	C	C	C	BC	BC	BC	BC	BC

Date		④ December 1964								
Sta. No.		09	10	04	05		07	08	09	10
Day		2	2	8	8	8	7	7	7	5
Item	Time Z(m)	1400	1620	0352	0240	0045	2250	2030	1818	2110
T °C	0	21.0	21.8	11.70	12.30	12.70	15.80	15.90	17.10	16.80
	10	20.54	21.34	11.50	11.70	12.59	15.42	15.84	16.02	16.53
	25	20.32	21.01	11.92	11.64	12.83	15.86	15.90	17.10	17.06
	50	14.95	16.08	6.86	4.30	11.40	15.83	16.55	17.24	17.15
	100	7.84	13.51	3.10	3.82	3.09	13.37	16.67	17.33	17.32
	150	3.21	10.37	—	1.58	1.65	2.56	3.11	9.90	11.47
	200	1.80	5.71	—	—	1.12	1.29	1.87	2.74	2.89
	300	0.85	1.51	—	—	0.55	0.81	0.93	1.14	1.13
	400	—	—	—	—	—	—	—	—	—
	Botm.	—	—	2.58	1.11	—	—	—	—	—
S ‰	0	32.25	32.48	33.51	34.04	33.53	34.16	34.40	34.22	34.20
	10	32.43	32.48	33.21	33.82	32.97	34.20	34.22	33.95	34.05
	25	32.63	33.24	33.15	33.86	34.20	34.22	34.42	34.36	34.05
	50	32.22	34.30	33.98	34.31	34.38	34.37	34.34	34.49	34.58
	100	34.22	34.24	33.86	34.42	34.22	33.82	34.36	34.16	34.58
	150	34.24	34.47	—	34.22	34.40	34.36	34.15	34.58	34.52
	200	34.24	34.16	—	—	34.22	34.22	34.22	34.76	34.56
	300	34.25	34.11	—	—	34.31	34.37	34.38	35.30	34.15
	400	—	—	—	—	—	—	—	—	—
	Botm.	—	—	33.84	33.78	—	—	—	—	—
Depth (m)		—	—	150	200	—	—	—	—	—
Secchi (m)		12	17	—	—	—	—	—	—	—
Color		3	3	—	—	—	—	—	—	—
Sea		4	3	2	2	3	5	4	4	4
Swell		3	1	1	1	2	3	2	2	2
Air Temp. (°C)		19.0	19.0	5.3	6.9	6.5	6.8	6.9	7.0	10.5
Baro. (mm)		782	781	782	782	782	782	782	782	780
Wind		NE. 3	NE. 2	NW. 2	NW. 2	NW. 3	NW. 4	NW. 3	W. 3	NW. 3
Cloud		As. 9	As. 9	O	O	Cu. 1	Cu. 2	Cu. 1	Cc. 2	Cu. 4
Weather		C	C	B	B	B	B	B	B	BC

D. 103 선 해양 관측 성적

Oceanographic Data, Line 103

Date		① March 1964						
Sta. No.		04	05	06	07	08	09	10
Day		29	29	30	30	30	30	30
Item	Time	2255	2340	0150	0320	0515	0710	0905
	Z (m)							
T °C	0	10.40	10.10	9.70	10.60	10.40	10.30	10.40
	10	10.38	10.21	9.87	10.71	10.42	10.41	10.37
	25	10.28	10.18	9.76	10.64	10.38	6.69	10.30
	50	7.27	10.14	9.70	10.23	10.36	8.35	10.19
	100	—	5.92	9.58	7.75	6.50	8.34	3.21
	150	—	—	6.48	3.77	1.88	1.57	2.02
	200	—	—	2.64	1.72	1.36	1.08	1.03
	300	—	—	0.93	0.92	0.69	0.58	0.64
	400	—	—	—	0.80	0.44	0.37	0.37
Botm.		3.30	2.30	0.76	—	—	—	—
S ‰	0	34.65	34.65	34.56	34.63	34.16	34.69	34.63
	10	34.61	34.56	34.56	34.67	34.63	34.67	34.63
	25	34.61	34.61	34.56	34.69	34.63	34.56	34.70
	50	34.31	34.60	34.49	34.63	34.52	34.45	34.56
	100	—	33.93	34.49	34.27	34.27	34.22	34.13
	150	—	—	34.27	34.11	34.20	29.20	34.20
	200	—	—	34.20	34.05	34.20	33.39	34.20
	300	—	—	34.09	34.00	34.20	34.22	34.20
	400	—	—	—	33.89	34.20	34.22	34.18
Botm.		34.11	34.15	34.07	—	—	—	—
Depth (m)		100	152	350	—	—	—	—
Secchi (m)		—	—	—	—	—	13	17
Color		—	—	—	—	—	—	—
Sea		2	3	3	4	5	5	5
Swell		1	2	2	2	3	3	3
Air Temp. (°C)		9.3	9.1	9.5	9.9	10.5	10.5	11.0
Baro. (mm)		773	773	772	772	772	771	771
Wind		S. 5	S. 5	S. 4	S. 5	S. 6	S. 6	S. 6
Cloud		Cu. 4	Cu. 4	St. 4	Ci. 4	Ci. 4	Ci. 1	Cc. 5
Weather		BC	BC	BC	BC	BC	BC	BC

Date		② July 1964						
Sta. No.		04	05	06	07	08	09	10
Day		17	17	17	17	17	17	17
Item	Time Z(m)	1120	1015	0845	0605	0500	0310	0110
T °C	0	21.30	18.40	18.30	18.80	18.50	22.30	22.30
	10	20.33	16.49	17.15	17.76	17.09	21.10	22.10
	25	10.47	9.04	11.67	13.11	15.05	18.29	19.07
	50	6.03	4.11	4.88	7.22	10.62	15.91	15.94
	100	—	1.99	2.00	2.86	3.62	9.61	14.35
	150	—	1.92	1.67	1.70	1.91	3.44	2.66
	200	—	—	1.03	1.19	1.30	2.49	2.52
	300	—	—	0.62	0.74	0.72	0.90	1.12
	400	—	—	—	—	—	—	—
	Botm.	4.78	1.68	—	—	—	—	—
S ‰	0	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—
	25	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—
	150	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—
	300	—	—	—	—	—	—	—
	400	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	—	—
Depth (m)		108	180	—	—	—	—	—
Secchi (m)		9	10	10	9	—	—	—
Color		4	4	3	3	—	—	—
Sea		3	4	4	4	4	5	4
Swell		1	2	2	2	2	2	2
Air Temp. (°C)		20.5	20.3	20.0	18.9	19.0	19.5	19.5
Baro. (mm)		767	766	766	766	767	768	767
Wind		NE. 2	S. 2	S. 2	S. 4	S. 3	S. 4	S. 2
Cloud		Cs. 8	St. 9	St. 6	Cs. 9	St. 7	St. 8	Ci. 8
Weather		C	BC	BC	R	BC	C	C

E. 102 선 해양 관측 성적

Oceanographic Data, Line 102

[illegible]

Date		④ October 1964				⑤ December 1964						
Sta. No.		04	05	06	07	04	05	06	07	08	09	10
Day		20	20	20	20	16	16	16	16	16	16	16
Item	Time Z (m)	1255	1455	1710	1920	0810	0923	1010	1137	1330	1520	1716
T °C	0	21.40	21.30	21.60	21.20	14.00	15.18	16.80	16.58	15.70	15.80	15.51
	10	20.34	21.52	21.21	20.95	13.86	15.38	16.46	16.16	15.62	15.81	15.04
	25	21.03	21.25	21.82	21.72	13.32	14.93	16.85	16.77	15.64	15.54	15.24
	50	15.00	15.76	17.10	15.21	9.64	13.73	16.75	16.79	15.51	15.48	15.15
	100	5.71	10.15	12.10	13.22	—	5.60	14.77	16.84	15.61	15.19	15.31
	150	2.34	3.32	3.25	3.16	—	1.77	3.35	6.26	10.27	8.33	7.16
	200	1.28	1.61	1.97	1.91	—	—	1.72	1.55	3.27	3.46	2.60
	300	0.69	0.88	0.97	0.87	—	—	0.97	0.76	0.97	0.86	0.92
	400	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	6.57	1.70	—	—	—	—	—
S ‰	0	32.97	32.70	33.57	33.53	34.42	34.60	34.45	34.43	34.33	34.27	34.31
	10	33.06	32.70	33.59	33.64	34.43	34.60	34.25	34.51	34.33	34.38	34.33
	25	33.12	33.19	33.64	34.07	34.24	34.47	34.38	34.51	34.36	34.45	34.40
	50	34.00	34.09	34.25	34.18	34.60	34.43	34.56	34.52	34.38	34.45	34.43
	100	34.04	34.11	34.56	34.34	—	34.25	34.56	34.52	34.40	34.45	34.45
	150	34.09	34.15	34.00	34.00	—	34.61	34.63	—	34.40	34.45	34.47
	200	34.11	34.16	33.98	34.05	—	—	34.60	34.52	34.45	34.47	34.47
	300	34.13	34.16	33.96	34.05	—	—	34.60	34.51	34.54	34.47	34.56
	400	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	34.78	34.60	—	—	—	—	—
Depth (m)		—	—	—	—	60	165	—	—	—	—	—
Secchi (m)		14	17	18	—	11	12	27	28	28	28	—
Color		—	—	—	—	—	—	—	—	—	—	—
Sea		0	1	1	1	3	3	3	3	2	2	1
Swell		1	1	1	1	1	1	1	1	1	1	1
Air Temp. (°C)		18.9	19.6	18.2	18.1	3.2	3.4	4.6	6.1	7.5	7.2	8.2
Baro. (mm)		777.5	776	775	777	783	783	783	783	781	781	781
Wind		NE.2	NE.2	ENE.2	SSE.3	WNW.2	NW.3	NW.3	NW.2	NW.2	N.1	N.1
Cloud		Sc.10	Sc.9	Sc.10	Sc.10	0	Cs.1	Cs.1	Cc.2	Cc.2	Cs.7	Cs.3
Weather		C	C	R	R	B	B	B	B	B	BC	BC

남 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS
SOUTHERN WATERS

1 9 6 4

A. 209선 해양관측성적

Oceanographic Data, Line 209

Date		① April 1964		② July 1964								
Sta. No.		07	08	04	05	06	07	08	09		01	02
Day		03	03	23	23	23	23	23	23		26	26
Time	Time Z(m)	1855	1645	0800	0700	0500	0335	0142	2345		1120	1219
T °C	0	13.80	13.70	20.40	20.20	20.50	20.30	23.00	22.50		18.40	20.70
	10	15.02	13.72	18.01	20.18	20.55	20.93	23.00	22.23		18.18	20.76
	25	13.66	13.53	11.38	15.62	16.93	16.85	19.26	17.87		15.30	17.59
	50	13.46	13.47	7.15	16.31	10.07	14.84	15.68	15.08		7.78	11.17
	100	13.00	12.71	—	7.53	3.23	6.18	14.88	13.16		—	1.91
	150	5.16	1.42	—	—	1.87	2.58	4.51	4.07		—	—
	200	1.53	0.93	—	—	1.50	1.65	2.63	1.74		—	—
	300	0.89	0.62	—	—	1.20	1.57	1.89	0.76		—	—
	400	0.66	0.43	—	—	—	—	—	—		—	—
Botm.		—	—	5.18	3.34	—	—	—	—		4.40	1.83
S ‰	0	34.67	34.69	32.16	32.36	32.21	32.85	33.78	33.95		32.77	32.81
	10	34.67	34.67	32.88	32.36	32.14	33.42	33.78	34.15		32.83	33.19
	25	34.67	34.67	34.65	34.61	33.78	33.75	34.15	34.31		33.19	33.24
	50	34.67	34.67	34.43	33.98	34.69	34.58	34.81	34.85		34.11	34.05
	100	34.54	34.67	—	34.61	34.11	34.22	34.83	34.89		—	34.07
	150	34.15	34.64	—	—	34.13	34.05	34.58	34.31		—	—
	200	34.05	34.04	—	—	34.11	34.13	34.29	34.47		—	—
	300	34.02	34.00	—	—	34.31	34.11	34.27	34.40		—	—
	400	33.98	33.96	—	—	—	—	—	—		—	—
Botm.		—	—	34.40	34.29	—	—	—	—		33.98	34.11
Depth (m)		—	—	67	78	—	—	—	—		64	126
Secchi (m)		—	13	7	11	—	—	—	—		7	11
Color		—	3	4	4	—	—	—	—		—	—
Sea		6	6	5	5	5	5	5	5		1	2
Swell		3	3	3	3	3	3	3	3		1	2
Air Temp. (°)		15.7	15.0	22.80	22.30	22.50	23.00	23.00	23.00		15.3	16.7
Baro. (mm)		762	764	771	771	771	772	772	773		—	—
Wind		SW. 6	S. 5	SW. 6	SW. 6	SW. 7	SW. 5	SW. 5	SW. 5		N. 2	N. 3
Cloud		St. 10	Sc. 10	St. 3	St. 4	St. 8	St. 5	St. 4	Cl. 3		Cc. 8	Cc. 8
Weather		R	R	B	B	C	B	B	B		C	C

Date		③ October 1964					④ December 1964					
Sta. No.		03	04	05	06	07	04	05	06	07	08	09
Day		26	26	26	26	26	17	17	17	17	16	16
em	Time Z (m)	1335	1520	1710	1850	2048	0655	0555	0355	0235	2320	2120
T °C	0	20.60	22.40	22.60	21.40	21.10	15.90	16.10	16.05	16.65	16.64	16.80
	10	20.22	20.66	21.15	20.48	20.32	15.82	15.68	15.93	16.64	16.32	16.83
	25	21.03	21.86	22.65	20.95	20.95	15.98	16.26	16.10	16.59	16.58	16.60
	50	14.51	20.79	22.74	21.03	20.93	15.81	15.94	16.13	16.41	16.52	16.41
	100	5.98	14.47	15.02	14.98	15.74	—	4.92	11.35	15.29	15.72	16.20
	150	1.96	4.04	8.69	9.42	11.84	—	—	1.34	1.84	3.34	3.63
	200	1.23	1.64	2.12	2.51	2.27	—	—	—	1.00	1.56	1.20
	300	0.79	0.84	0.65	1.06	—	—	—	—	0.57	0.66	0.65
	400	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	15.27	7.57	0.80	—	—	—
S ‰	0	33.22	33.82	34.27	33.64	34.34	34.36	34.29	34.33	34.25	34.27	34.38
	10	33.28	33.84	34.27	33.48	33.46	34.38	34.33	34.33	34.31	34.31	—
	25	33.28	33.86	34.25	33.46	33.48	34.40	34.38	34.34	34.45	34.43	34.40
	50	33.66	34.27	34.24	33.57	33.53	34.45	34.40	34.40	34.47	34.45	34.40
	100	34.11	34.27	34.18	34.25	34.34	—	34.47	34.49	34.52	34.47	34.49
	150	34.00	34.16	34.18	34.27	34.27	—	—	34.49	34.54	34.47	34.49
	200	34.00	34.04	34.07	34.07	34.09	—	—	—	34.54	34.49	34.49
	300	34.00	34.00	34.07	34.07	—	—	—	—	34.54	34.49	34.51
	400	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	34.45	34.47	34.51	—	—	—
Depth (m)		—	—	—	—	208	73	122	200	—	—	—
Secchi (m)		10	11	11	—	—	—	—	—	—	—	—
Color		—	—	—	—	—	—	—	—	—	—	—
Sea		2	2	3	3	3	2	3	3	2	1	1
Swell		2	2	2	2	2	1	1	1	1	1	1
Air Temp. (°C)		16.4	16.2	15.0	16.1	15.1	7.3	8.1	9.4	9.6	9.8	9.6
Baro. (mm)		—	—	—	—	—	778	778	779	779	780	781
Wind		N.3	N.3	NNE.4	NNE.4	NNE.4	N.1	N.2	N.2	N.1	N.1	N.1
Cloud		Cc.8	Cc.7	Cc.6	Cc.6	Cc.7	As.7	As.3	Ac.8	Ac.8	Ac.8	Cc.7
Weather		C	C	BC	BC	—	BC	BC	C	C	C	BC

B. 208 선 해양 관측 성적

Oceanographic Data, Line 208

Date		① March 1964							
Sta. No.		01	02	03	04	35°43'15" 36°00'00" 129°56'00" 130°00'00"	36°00'00" 36°00'00" 129°47'15" 129°37'00"	36°00'00" 36°00'00" 129°37'00" 129°37'00"	36°00'00" 36°00'00" 129°37'00" 129°37'00"
Day		5		5	5	5	5	5	6
Item	Time Z(m)	0820	0922	1110	1305	1735	2005	2250	0635
T C	0	12.8	13.5	14.4	13.9	13.6	11.1	13.5	12.0
	10	12.8	13.5	14.4	13.7	13.6	11.0	13.4	10.9
	25	12.7	13.3	14.3	13.6	13.6	10.5	13.4	10.8
	50	—	13.1	13.9	13.6	13.4	10.1	13.2	7.5
	75	—	12.6	13.6	13.6	—	—	—	—
	100	—	12.5	13.0	13.5	12.9	7.7	5.0	3.5
	150	—	—	—	—	5.0	2.5	3.5	—
	Botm.	12.6	7.5	12.8	12.5	3.0	—	—	—
S ‰	0	34.45	34.45	34.45	34.45	34.45	34.20	34.36	34.36
	10	34.45	34.42	34.43	34.45	34.50	34.20	34.27	34.47
	25	34.36	34.34	34.38	34.36	34.36	34.16	34.27	34.33
	50	—	34.27	34.38	34.36	34.36	34.16	34.27	34.13
	75	—	34.27	34.29	34.34	—	—	—	—
	100	—	34.25	34.24	34.31	34.27	33.82	33.80	33.73
	150	—	—	—	—	33.74	33.69	33.73	34.36
	Botm.	34.36	34.25	34.20	34.29	33.69	—	—	—
Depth (m)		64	123	156	—	—	—	—	100
Secchi (m)		10	15	17	17	15	—	—	—
Color		—	—	—	—	—	—	—	—
Sea		—	—	—	—	—	—	—	—
Swell		—	—	—	—	—	—	—	—
Air Temp. (°C)		9.0	10.3	—	14.0	—	10.5	11.0	9.7
Baro. (mm)		—	—	—	—	—	—	—	—
Wind		—	—	—	W. 1	—	—	W. 2	—
Cloud		—	—	—	—	—	—	—	—
Weather		B	B	B	B	B	B	B	B

Date		② April 1964						③ May 1964			
Sta. No.		01	02	03	04	05	06	01	02	03	04
Day		3	3	3	3	3	3	9	9	9	9
Item	Time Z(m)	0622	0715	0830	0945	1105	1220	1600	1425	1350	1200
T C	0	12.60	14.00	14.50	14.40	13.80	14.50	17.2	18.1	19.2	19.6
	10	12.51	14.08	14.56	14.32	13.79	14.28	15.5	15.7	15.6	18.4
	25	12.38	13.10	14.55	14.26	13.60	14.16	14.2	14.9	15.6	16.2
	50	—	12.55	14.31	14.13	13.43	13.85	12.5	13.0	15.3	16.0
	75	—	—	—	—	—	—	—	—	—	—
	100	—	6.92	12.60	13.98	13.20	13.12	—	6.5	13.6	15.2
	150	—	—	—	—	—	—	—	—	—	13.2
Botm.		10.25	6.08	7.03	13.81	11.86	12.82	—	—	—	—
S ‰	0	34.47	34.49	34.63	34.67	34.65	34.99	—	—	—	—
	10	34.54	34.74	34.63	34.67	34.67	34.63	—	—	—	—
	25	34.56	34.54	34.63	34.67	34.67	34.67	—	—	—	—
	50	—	34.49	34.63	34.67	34.67	34.63	—	—	—	—
	75	—	—	—	—	—	—	—	—	—	—
	100	—	34.49	34.58	34.65	34.67	34.63	—	—	—	—
	150	—	—	—	—	—	—	—	—	—	—
Botm.		34.67	34.29	34.31	34.61	34.65	34.63	—	—	—	—
Depth (m)		42	118	141	147	140	129	70	100	—	160
Secchi (m)		9	11	15	12	10	12	4	4	15	14
Color		5	5	4	4	4	4	—	—	—	—
Sea		3	3	3	4	5	5	2	3	3	3
Swell		2	2	3	3	3	3	1	1	1	1
Air Temp. (°C)		13.5	13.4	15	15.5	15.3	10.4	20.3	20.1	20.0	21.2
Baro. (mm)		768	768	768	768	768	767	—	—	—	—
Wind		W. 2	SW. 2	SW. 3	SW. 4	S. 5	S. 5	SW. 4	SW. 4	SW. 4	SW. 3
Cloud		St. 3	Cs. 10	St. 9	St. 10	St. 10	Cc. 9	Cc. 8	Cc. 8	Ci. 7	Ci. 5
Weather		C	C	C	R	R	C	C	C	B	B

Date				⑦ September 1964						
Sta. No.		05	06	01	02	03	04	05	01	02
Day		14	14	30	30	30	30	30	28	28
Item	Time Z(m)	1525	1335	1415	1505	1415	1725	1850	1043	1146
T C	0	28.2	28.6	23.00	22.70	23.00	23.40	23.70	18.8	19.7
	10	27.40	27.31	22.94	23.21	22.81	23.45	23.87	19.03	20.63
	25	27.29	25.30	22.73	23.60	23.13	23.24	24.08	18.44	20.86
	50	21.92	20.05	—	12.74	13.97	17.52	18.11	9.97	17.40
	75	—	—	—	—	—	—	—	—	—
	100	16.06	15.92	—	—	8.97	14.50	14.57	—	10.79
	150	—	—	—	—	—	—	—	—	—
	Botm.	15.98	15.87	6.10	3.74	3.33	2.35	13.08	5.29	5.87
S ‰	0	31.26	31.53	32.25	31.73	31.96	33.59	33.71	32.86	33.55
	10	31.28	31.46	32.18	32.34	31.74	33.51	33.73	32.86	33.42
	25	31.28	32.14	33.04	32.65	33.24	33.69	33.77	32.92	33.40
	50	33.40	33.91	—	34.29	34.28	34.24	34.25	34.09	34.25
	75	34.67	—	—	—	34.09	34.11	34.36	—	—
	100	34.79	34.78	—	—	—	—	—	—	34.25
	150	—	—	—	—	—	—	—	—	—
	Botm.	34.79	—	34.09	34.11	33.68	33.77	34.09	34.09	34.25
Depth (m)		126	124	62	111	135	144	142	82	120
Secchi (m)		23	22	3	5	5.5	14	—	10	14
Color		—	—	4	4	4	4	—	—	—
Sea		0	0	4	4	4	4	4	2	2
Swell		1	0	2	2	2	2	2	1	1
Air Temp. (°C)		28.6	28.1	20.4	20.7	20.2	20.0	21.1	18.0	18.4
Baro. (mm)		—	—	779	779	779	779	779	778	778
Wind		W. 3	W. 3	N. 2	NE. 2	NE. 3	NE. 3	NE. 3	NE. 3	NE. 3
Cloud		Cl. 2	Cs. 2	Cs. 6	Cs. 8	Cc. 7	Cc. 4	Cc. 3	Cl. 1	Cl. 1
Weather		B	B	BC	C	BC	BC	BC	B	B

C. 207 선 해양 관측 성적

Oceanographic Data, Line 207

Date		① April 1964					② May 1964				
Sta. No.		01	02	03	04	05	01	02	03	04	05
Day		11	11	11	11	11	8	8	8	8	8
Item	Time Z(m)	0935	1025	1115	1220	1305	1025	1145	1240	1400	1500
T ℃	0	13.3	14.7	14.6	15.2	15.1	18.4	20.1	18.9	19.1	18.6
	10	13.22	14.52	14.58	15.20	15.12	15.0	16.4	15.5	17.4	17.9
	25	13.44	14.47	14.52	15.20	15.09	14.5	15.7	15.4	16.2	17.4
	50	13.46	12.96	13.72	15.19	15.07	14.5	13.8	15.4	15.9	16.9
	100	—	—	11.26	14.08	14.89	—	—	12.9	14.3	15.4
	150	—	—	—	11.78	—	—	—	—	—	—
	200	—	—	—	11.22	—	—	—	—	—	—
	Botm.	13.02	12.13	11.19	10.76	13.02	13.6	13.2	—	—	—
S ‰	0	34.49	34.49	34.58	34.67	34.02	—	—	—	—	—
	10	34.40	34.47	34.58	34.58	34.58	—	—	—	—	—
	25	34.40	34.58	34.58	34.58	34.58	—	—	—	—	—
	50	34.40	34.58	34.58	34.58	34.58	—	—	—	—	—
	100	—	—	34.58	34.58	34.58	—	—	—	—	—
	150	—	—	—	34.58	—	—	—	—	—	—
	200	—	—	—	34.58	—	—	—	—	—	—
	Botm.	34.40	34.58	34.56	34.45	34.56	—	—	—	—	—
Depth (m)		81	95	110	219	154	90	100	130	—	150
Secchi (m)		7	14	12	22	14	4	6	9	13	19
Color		5	3	4	4	4	—	—	—	—	—
Sea		2	2	3	3	3	0	0	0	1	—
Swell		1	1	1	1	1	1	1	1	1	—
Air Temp. (°C)		13.0	12.9	13.0	13.0	—	21.9	20.0	21.4	22.4	21.6
Baro. (mm)		776	776	776	776	776	—	—	—	—	—
Wind		E. 1	E. 4	E. 4	E. 5	E. 4	SE. 2	SE. 2	SE. 2	SE. 3	SE. 3
Cloud		Cs. 7	St. 10	St. 10	Cu. 9	Cl. 10	Cl. 6	Cl. 6	Cl. 6	Cl. 5	Cl. 5
Weather		BC	D	D	C	C	BC	BC	BC	BC	BC

③ May 1964					④ May 1964				
01	02	03	04	05	01	02	03	04	05
24	24	24	24	24	28	28	28	28	28
0850	0950	1120	1220	1255	1118	1020	0945	0848	0810
17.5	19.3	19.9	20.6	22.0	18.20	18.70	19.30	19.40	19.60
17.5	18.9	18.4	19.8	19.8	18.17	18.69	18.12	19.38	19.32
16.9	17.1	17.9	19.0	17.6	17.07	16.51	15.70	18.00	18.88
14.6	15.4	15.4	16.7	16.5	14.89	14.46	15.05	16.63	17.44
—	—	14.8	15.3	15.7	—	—	14.26	15.06	15.54
—	—	—	—	—	—	—	—	14.60	—
—	—	—	—	—	—	—	—	14.11	—
—	15.2	—	—	—	14.33	14.27	14.32	13.42	15.19
—	—	—	—	—	34.11	34.51	34.43	34.51	34.56
—	—	—	—	—	34.18	24.47	34.47	34.58	34.56
—	—	—	—	—	34.24	34.43	34.51	34.61	34.58
—	—	—	—	—	34.33	34.43	34.51	34.61	34.61
—	—	—	—	—	—	—	34.58	34.60	—
—	—	—	—	—	—	—	—	34.58	—
—	—	—	—	—	—	—	—	34.58	—
—	—	—	—	—	34.36	34.43	34.58	34.58	34.61
—	—	—	—	—	84	98	119	221	152
12	12	18	23	23	10	13	13	17	23
—	—	—	—	—	5	4	4	4	4
3	0	0	0	0	4	4	4	3	3
2	1	1	1	1	2	2	2	2	2
19.4	19.6	21.5	24.3	24.8	18.2	18.2	18.0	18.5	18.2
—	—	—	—	—	774	774	774	774	774
SW. 2	SW. 3	SW. 3	SW. 1	S. 2	W. 5	NW. 4	NW. 5	NW. 3	NE. 2
Ci. 4	—	—	Ci. 8	Ci. 7	Cs. 6	St. 7	St. 7	St. 8	St. 7
BC	F	F	C	BC	BC	BC	BC	C	BC

[illegible]

⑦ September 1964							⑧ October 1964				
01	02	03	04	05	S ₁ 34°29'30" 123°41'05"	S ₂ 34°27'15" 128°23'07"	01	02	03	04	05
2	2	2	2	2	3	3	1	1	1	1	1
1005	1050	1135	1235	1330	1325	1900	0905	0825	0740	0658	0614
26.00	26.20	26.50	26.80	27.20	27.30	27.10	18.1	19.5	18.4	21.4	21.3
25.85	26.25	26.68	27.11	27.13	27.05	26.97	18.83	19.56	20.02	21.71	22.64
20.68	27.46	26.17	27.09	27.68	26.80	25.53	18.05	20.05	21.48	22.17	22.44
11.85	13.65	17.18	21.05	21.58	19.20	—	14.24	15.33	20.66	24.03	22.29
—	—	12.23	16.29	16.18	—	—	—	—	16.49	15.67	18.99
—	—	—	14.47	—	—	—	—	—	—	15.62	—
—	—	—	3.46	—	—	—	—	—	—	11.53	—
8.10	7.49	6.35	3.34	3.64	13.02	14.43	13.54	12.96	15.64	9.13	15.91
31.82	30.72	30.81	31.09	31.29	31.28	31.29	32.39	32.57	33.60	33.55	33.57
31.29	30.77	30.82	30.72	31.40	31.28	32.50	32.84	32.81	33.78	33.89	33.89
32.52	32.92	32.74	33.03	33.03	32.11	32.65	33.12	32.88	33.78	33.95	34.07
33.98	34.22	34.33	33.95	33.95	33.62	—	33.67	34.07	33.84	34.11	34.31
—	—	34.24	34.52	34.38	—	—	—	—	34.45	34.11	34.43
—	—	—	34.60	—	—	—	—	—	—	34.22	—
—	—	—	34.72	—	—	—	—	—	—	34.24	—
34.18	34.22	34.00	34.72	32.65	34.20	33.91	34.07	34.11	34.34	34.22	34.33
84	90	116	230	156	75	54	80	104	138	224	155
13	14	18	15	13	18	—	10	11	—	—	—
4	4	14	3	4	5	—	—	—	—	—	—
3	4	5	5	6	6	5	2	2	1	3	3
2	2	2	3	3	3	3	1	1	1	2	3
25.0	25.2	25.0	24.9	24.3	26.4	25.3	17.7	17.7	18.0	19.3	18.4
770	770	770	769	769	769	769	776	776	776	777	776
NE.3	NE.3	NE.3	SW.4	SW.4	W.4	SW.3	NW.2	NW.2	SW.2	W.4	W.4
St.6	St.8	St.8	Cs.8	St.8	St.5	St.4	Cb.10	Cb.10	Cb.10	Cb.10	b.10
BC	C	C	C	C	BC	BC	C	C	R	R	R

Date		⑨ November 1964					⑩ December 1964				
Sta. No.		01	02	03	04	05	01	02	03	04	05
Day		19	19	19	19	19	30	30	30	30	30
Item	Time	2155	2104	2010	1852	1800	1015	0930	0835	0725	0625
	Z(m)										
T	0	14.04	16.21	17.80	17.59	17.81	14.50	15.70	16.70	16.40	17.40
	10	13.82	15.68	17.72	16.77	17.43	14.33	15.59	16.68	16.52	17.35
	25	13.83	15.85	17.74	17.37	17.75	14.32	15.55	16.73	16.36	17.28
	50	13.73	15.15	16.73	17.53	17.73	13.41	14.18	16.00	16.34	17.10
	100	—	—	14.68	17.43	17.45	—	—	14.14	16.26	16.97
C	150	—	—	—	8.48	13.77	—	—	—	13.48	—
	200	—	—	—	6.37	—	—	—	—	7.78	—
Botm.		13.72	14.15	13.12	5.75	7.92	12.94	12.26	8.84	6.35	15.33
S	0	34.43	34.60	34.78	34.79	34.79	34.45	34.63	34.81	34.67	34.99
	10	34.42	34.61	34.78	34.79	34.81	34.45	34.63	34.81	34.63	34.99
	25	34.27	34.61	34.79	34.79	34.81	34.47	34.45	34.81	34.63	34.83
	50	34.25	34.60	34.70	34.85	34.81	34.20	34.31	34.11	34.63	34.81
	100	—	—	34.45	34.89	34.83	—	—	34.29	34.63	34.78
‰	150	—	—	—	34.47	34.87	—	—	—	34.13	—
	200	—	—	—	34.43	—	—	—	—	34.63	—
Botm.		34.24	34.27	34.45	34.42	34.89	34.11	34.31	34.78	34.60	34.81
Depth (m)		75	95	120	218	162	86	102	138	228	158
Secchi (m)		—	—	—	—	—	8	13	15	21	—
Color		—	—	—	—	—	—	—	—	—	—
Sea		2	2	2	3	3	5	6	5	5	5
Swell		1	1	1	1	1	3	3	3	3	3
Air Temp. (°C)		5.4	7.2	7.7	7.3	8.9	11.5	11.9	12.2	11.8	12.7
Baro. (mm)		782	782	782	782	782	777	777	777	778	778
Wind		N.1	N.1	N.1	NW.2	NW.2	NW.5	NW.5	NW.5	NW.4	NW.3
Cloud		Ac.4	Ac.10	Ac.10	Ac.7	Ac.7	St.7	St.7	St.7	Cc.5	Cc.6
Weather		BC	C	C	BC	BC	BC	BC	BC	BC	BC

D. 206 선 해양 관측 성적

Oceanographic Data, Line 206

Date		① April 1964				② May 1964			
Sta. No.		01	02	03	04	01	02	03	04
Day		16	15	15	14	23	28	28	28
Item	Time	0645	0200	0030	2300	2420	0125	0240	0350
	Z (m)								
T °C	0	14.00	15.50	15.80	16.00	17.20	17.60	18.00	18.30
	10	13.85	14.60	15.22	15.50	16.82	17.08	17.93	18.15
	25	13.61	14.24	15.09	15.43	16.20	15.00	17.18	17.41
	50	13.46	12.67	13.72	14.18	15.79	14.49	14.17	14.90
	100	—	—	—	13.56	—	—	—	14.81
	Botm.	13.38	12.52	12.67	13.36	14.56	14.37	13.92	14.79
S ‰	0	34.60	34.72	34.67	34.58	34.00	34.36	34.40	34.27
	10	34.47	34.72	34.76	34.67	34.04	34.40	34.40	34.27
	25	34.79	34.67	34.80	34.80	34.04	34.40	34.42	34.31
	50	34.65	34.60	34.69	34.65	34.15	34.40	34.43	34.45
	100	—	—	—	34.63	—	—	—	34.58
	Botm.	34.63	34.58	34.69	34.63	34.36	34.42	34.45	34.58
Depth (m)		64	78	90	15	60	71	86	132
Secchi (m)		—	—	—	—	—	—	—	—
Color		—	—	—	—	—	—	—	—
Sea		6	3	4	3	3	3	3	3
Swell		3	1	1	1	1	1	1	1
Air Temp. (°C)		—	16.5	17.0	17.2	17.3	17.4	18.3	18.2
Baro. (mm)		773	771	772	772	775	775	775	776
Wind		SW. 3	SW. 3	SW. 3	S. 4	E. 1	E. 1	E. 1	E. 1
Cloud		8	F. 10	4	Cl. 5	Cc. 8	St. 7	St. 8	St. 8
Weather		C	C	BC	BC	C	BC	C	C

Date		③ June 1964					
Sta. No.		S ₁ 34°44'50" 129°00'15"	S ₂ 34°34'45" 128°59'00"	01	02	03	04
Day		25	25	25	25	25	25
Item	Time Z (m)	0913	1405	2006	1857	1741	1625
T °C	0	19.60	21.50	20.05	21.30	21.80	22.20
	10	19.00	21.02	20.22	20.33	21.32	21.17
	25	17.54	20.19	18.64	17.83	20.34	19.12
	50	15.32	16.20	15.31	15.19	16.38	16.89
	100	—	—	—	—	—	15.00
	Botm.	14.83	14.03	15.15	15.05	14.94	11.50
S ‰	0	33.84	33.30	33.64	33.39	32.54	32.81
	10	33.84	33.84	33.75	33.71	33.21	33.31
	25	33.96	33.95	34.00	34.00	33.75	33.77
	50	34.25	33.25	34.15	34.25	34.09	34.05
	100	—	—	—	—	—	34.31
	Botm.	34.36	34.36	34.16	34.31	34.27	34.36
Depth (m)		86	102	68	80	104	132
Secchi (m)		10	14	—	12	13	12
Color		1	1	—	1	1	1
Sea		0	0	1	1	1	1
Swell		0	1	1	1	1	1
Air Temp. (°C)		20.9	22.0	20.6	22.0	22.4	23.0
Baro. (mm)		767	767	765	766	767	776
Wind		SW. 1	SW. 1	SW. 1	SW. 1	SW. 1	SW. 1
Cloud		St. 9	St. 9	Cu. 7	Cu. 6	St. 8	St. 8
Weather		C	C	C	BC	C	C

E. 205 선 해양 관측 성적

Oceanographic Data, Line 205

Date		① April 1964						② May 1964	
Sta. No.		01	02	03	04	05	S ₅ 33°52'36" 127°36'00"	01	02
Day		18	18	18	18	18	18	27	27
Item	Time Z(m)	0858	1005	1115	1300	1445	1830	1050	1210
T C	0	14.7	15.4	15.4	16.4	17.9	16.5	17.5	18.7
	10	14.13	14.79	14.02	15.18	16.30	15.53	17.00	18.61
	25	14.01	13.90	13.24	13.81	15.52	13.48	16.58	17.31
	50	—	—	12.97	13.15	14.75	13.14	15.68	14.25
	100	—	—	—	—	—	—	—	—
	Botm.	13.55	13.03	12.81	13.07	14.54	13.07	15.62	14.20
S ‰	0	34.74	34.67	34.67	34.58	34.40	34.63	33.86	34.20
	10	34.58	34.58	34.67	34.63	34.63	34.54	33.86	34.20
	25	34.56	34.58	34.67	34.63	34.61	34.60	33.86	34.15
	50	—	—	34.67	34.67	34.61	34.31	33.82	34.16
	100	—	—	—	—	—	—	—	—
	Botm.	34.56	34.58	34.81	34.65	34.60	34.67	34.02	34.13
Depth(m)		54	57	82	87	92	87	60	59
Secchi (m)		8	15	12	14	9	14	12	17
Color		6	6	5	5	5	5	5	5
Sea		2	2	2		2	2	3	3
Swell		2	2	2	2	2	2	1	2
Air Temp. (°C)		18.5	18.6	19.0	19.0	19.5	19.4	17.5	18.2
Baro. (mm)		775	775	775	775	774	775	775	775
Wind		SW, 2	SW, 2	SW, 1	SW, 1	SW, 1	SW, 1	N, 4	N, 3
Cloud		St. 9	St. 9	St. 9	St. 8	St. 8	St. 8	Cl. 8	St. 7
Weather		C	C	C	C	C	C	C	BC

Date		② May 1964			③ June 1964			
Sta. No.		03	04	05	01	02	03	04
Day		27	27	27	29	29	29	29
Item	Time Z (m)	1320	1500	1645	1407	1510	1625	1800
T C	0	17.8	20.0	20.5	20.3	20.8	21.4	21.5
	10	17.27	19.87	20.13	20.05	20.53	21.36	21.49
	25	15.45	17.68	19.84	18.58	19.28	16.88	18.50
	50	14.50	15.08	19.08	16.33	15.32	15.18	15.50
	100	—	—	15.27	—	—	—	—
	Botm.	14.39	15.03	14.99	15.35	15.16	15.02	14.98
S ‰	0	34.15	34.07	34.24	33.62	33.57	33.31	33.31
	10	34.15	34.07	34.31	33.66	33.64	33.31	33.31
	25	34.15	34.16	34.31	33.95	33.92	34.04	33.93
	50	34.15	34.18	34.31	34.00	34.13	34.33	33.34
	100	—	—	34.38	—	—	—	—
	Botm.	34.22	34.31	34.40	34.04	34.25	34.43	34.45
Depth (m)		81	90	114	64	60	76	92
Secchi (m)		15	18	18	9	12	14	17
Color		5	5	5	4	4	4	3
Sea		3	3	3	4	4	4	4
Swell		2	2	2	3	3	3	3
Air Temp. (C°)		17.8	18.6	19.2	22.2	21.6	21.7	22.6
Baro. (mm)		775	775	775	771	771	770	770
Wind		E. 3	E. 2	E. 2	SE. 4	SE. 4	SE. 4	SE. 3
Cloud		St. 8	Cl. 8	St. 8	Cs. 2	Cc. 2	Cc. 2	Cc. 1
Weather		C	C	C	B	B	B	B

			④ September 1964						
05	S ₈ 33°44' 20" 127°52' 20"	S ₉ 33°51' 28" 127°37' 30"	01	02	03	04	05	S ₄ 33°44' 00" 127°53' 10"	S ₅ 33°52' 00" 127°37' 00"
29	29	29	5	5	5	5	5	5	5
1945	2140	2310	1405	1525	1635	1815	1940	2140	2330
22.1	21.4	19.7	27.3	27.8	27.6	28.1	28.0	27.6	27.5
21.99	21.47	20.00	27.23	27.33	27.30	26.45	27.87	27.75	27.63
21.33	18.91	17.96	17.44	26.28	26.30	27.43	28.00	23.52	23.98
17.33	15.24	14.73	14.46	13.59	13.41	14.91	18.65	14.10	13.34
14.98	—	—	—	—	—	—	14.25	—	—
15.00	15.05	14.66	13.76	13.29	13.43	14.35	14.18	14.32	13.30
32.27	33.24	33.40	30.97	30.97	30.97	30.16	30.32	30.50	30.23
32.38	33.26	33.84	30.97	31.00	31.00	30.30	30.39	30.54	30.05
32.79	33.84	34.07	33.53	32.12	31.76	30.54	31.09	30.55	30.10
33.84	34.38	34.25	33.87	32.50	33.84	32.94	33.84	31.09	33.96
34.36	—	—	—	—	—	—	33.87	—	—
34.36	34.38	34.25	33.82	33.82	33.96	33.51	34.42	34.34	33.98
108	97	88	62	60	78	92	114	98	84
—	—	—	7	16	14	15	—	—	—
—	—	—	5	5	4	4	—	—	—
5	2	2	4	4	5	5	4	4	4
4	3	3	3	3	3	3	3	3	3
22.5	22.3	21.5	28.0	28.6	28.3	28.0	26.8	26.9	26.5
771	771	771	772	772	772	771	771	773	773
SE. 4	SE. 2	SE. 2	SW. 3	SW. 3	SW. 4	SW. 4	SW. 4	SW. 3	SW. 3
Ci. 6	—	—	Ci. 8	St. 3	Cs. 4	St. 3	Cc. 5	Ci. 4	St. 3
BC	B	B	C	BC	BC	BC	BC	BC	BC

F. 204 선 해양 관측 성적

Oceanographic Data, Line 204

Date		① April 1964						
Sta. No.		04	05	06	S ₆ 33°10'45" 127°12'15"	S ₇ 33°10'30" 127°26'20"	01	02
Day		21	21	21	23	23	27	27
Item	Time Z(m)	0925	1055	1235	0750	0935	0930	0805
T C	0	16.50	17.20	16.90	16.70	18.30	17.50	17.60
	10	15.18	15.98	15.78	16.62	18.50	17.13	17.46
	25	14.06	14.52	14.89	15.70	17.75	16.42	16.43
	50	13.71	14.28	14.66	14.74	16.74	—	—
	100	—	—	13.98	14.39	15.82	—	—
	Botm.	13.69	13.58	13.88	14.17	15.97	16.38	17.63
S ‰	0	34.04	34.33	34.40	34.22	34.51	33.96	33.86
	10	34.31	34.42	34.25	34.25	34.49	33.96	33.86
	25	34.31	34.58	34.22	34.29	34.49	33.91	33.96
	50	34.29	34.58	34.22	34.22	34.49	—	—
	100	—	—	34.31	34.22	34.42	—	—
	Botm.	34.31	34.56	34.31	34.22	34.40	33.91	34.00
Depth (m)		81	94	118	112	110	32	36
Secchi (m)		13	12	14	8	11	8	7
Color		5	5	4	4	4	5	5
Sea		4	3	4	5	6	3	3
Swell		2	2	2	3	3	1	1
Air Temp. (°C)		17.8	19.2	18.8	16.0	16.0	17.8	17.7
Baro. (mm)		772	773	772	776.5	775	775	775
Wind		E. 4	E. 4	E. 6	E. 7	E. 6	NE. 3	NE. 3
Cloud		St. 5	Sc. 5	St. 5	St. 7	Sc. 7	Cc. 8	Cs. 5
Weather		BC	BC	BC	BC	BC	C	BC

② May 1964				③ June 1964			④ July 1964		
03	04	05	06	04	05	06	S ₁₁ 33°13'30" 127°02'20"	01	02
27	25	25	25	30	30	30	3	29	29
0650	2130	2000	1820	1035	1200	1320	1040	1245	1150
17.50	18.00	18.40	18.70	21.10	21.50	21.70	21.60	27.30	27.20
17.33	17.52	18.28	18.28	20.86	21.21	21.38	20.37	27.14	27.12
16.06	16.12	16.50	17.76	17.04	18.66	20.49	19.38	—	26.42
—	15.82	15.98	16.17	14.76	16.04	16.13	16.59	—	—
—	—	—	15.24	—	—	14.87	15.18	—	—
15.09	14.47	14.33	14.82	14.75	14.93	14.87	—	25.79	25.08
33.80	34.09	34.11	34.09	33.26	33.24	33.13	—	30.64	30.66
33.86	34.18	34.13	34.11	33.31	33.24	33.19	—	—	30.50
33.96	34.22	34.13	34.13	33.93	33.84	33.62	—	—	31.33
—	34.31	34.31	34.13	34.18	34.36	34.34	—	—	—
—	—	—	34.27	—	—	34.43	—	—	—
34.04	34.38	34.31	34.31	34.24	34.42	34.43	—	31.60	32.43
43	85	98	132	84	96	124	108	30	40
8	—	—	—	13	14	15	14	17	15
5	—	—	4	4	4	3	3	—	—
3	3	4	4	2	2	2	2	4	4
1	2	2	2	1	1	2	1	3	3
18.2	17.8	17.8	20.0	23.0	22.9	23.1	24.0	27.8	27.5
775	771	771	771	772	772	772	772	—	—
NE. 4	N. 3	N. 3	NW. 3	ESE. 2	ESE. 2	ESE. 2	SSW. 3	NE. 4	NE. 4
St. 4	St. 3	St. 4	St. 3	F. 9	Cs. 8	Cu. 9	Cb. 9	Cl. 6	Cl. 8
BC	B	B	B	C	C	C	C	BC	C

G. 203선 해양관측성적

Oceanographic Data, Line 203

Date		① April 1964			② May 1964		
Sta. No.		01	02	03	01	02	03
Day		26	26	26	22	22	22
Item	Time Z(m)	0505	0355	0210	1125	1245	1455
T C	0	14.70	14.50	15.00	16.60	17.00	19.20
	10	14.96	14.72	15.01	16.36	17.68	18.76
	25	14.99	14.70	14.88	15.71	16.61	18.12
	50	13.41	14.43	14.83	14.69	14.65	17.25
	100	—	—	—	—	13.56	14.21
	Botm.	13.33	13.24	13.72	14.58	13.31	13.44
S ‰	0	34.13	34.13	34.13	34.02	34.04	34.04
	10	34.13	34.13	34.13	33.98	34.04	34.04
	25	34.13	34.13	34.18	34.00	34.05	34.05
	50	34.20	34.20	34.20	34.00	34.07	34.05
	100	—	—	—	—	34.04	34.04
	Botm.	34.22	34.22	34.20	33.95	34.04	—
Depth (m)		74	81	101	63	125	112
Secchi (m)		—	—	—	16	18	20
Color		—	—	—	5	5	4
Sea		5	5	5	3	3	3
Swell		3	3	3	2	2	2
Air Temp. (°C)		13.5	13.8	15.4	18.1	18.1	19.4
Baro. (mm)		772	771	771	770	770	770
Wind		N.7	NW.6	NW.5	SW.3	W.4	W.3
Cloud		St.8	Cl.8	Cc.7	Cl.3	Cs.7	St.4
Weather		C	C	BC	BC	BC	BC

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서 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS
WESTERN WATERS

1 9 6 4

A. 314 선 해양 관측 성적

Oceanographic Data, Line 314

Date		① April 1964						
Sta. No.		01	02	03	04	05	06	07
Day		23	23	23	23	24	25	25
Item	Time	1120	1305	1450	1630	0720	1830	2015
	Z (m)							
T °C	0	19.00	17.90	18.10	17.90	17.30	17.40	16.20
	10	19.01	17.94	18.28	18.04	17.37	17.21	16.31
	25	17.56	16.33	17.11	16.56	17.25	16.36	16.27
	50	16.70	15.85	15.97	15.50	15.11	15.80	15.37
	100	15.61	15.46	—	—	—	15.16	—
	150	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—
	Botm.	15.59	15.46	15.46	14.82	14.51	15.18	14.65
S ‰	0	34.40	34.20	34.27	34.22	34.13	34.13	34.04
	10	34.40	34.20	34.34	34.29	34.13	34.13	34.07
	25	34.40	34.27	34.42	34.34	34.13	34.16	34.07
	50	34.49	34.40	34.42	34.34	34.15	34.20	34.11
	100	34.49	34.40	—	—	—	34.20	—
	150	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—
	Botm.	34.45	34.45	34.42	34.34	34.16	34.20	34.11
Depth (m)		108	116	103	100	103	112	99
Secchi (m)		11	11	11	10	10	10	—
Color		4	4	3	3	4	4	—
Sea		6	6	7	7	7	6	6
Swell		3	3	3	3	3	3	3
Air Temp. (C°)		16.5	16.4	16.5	16.0	16.4	18.0	17.5
Baro. (mm)		775	775	775	775	775	768	768
Wind		E. 7	E. 6	E. 6	E. 7	E. 8	S. 7	S. 7
Cloud		St. 8	St. 8	St. 8	St. 8	St. 6	Cc. 10	St. 9
Weather		C	C	C	C	Bc	B	C

Date		② May 1964								
Sta. No.		02	03	04	05	06	07	08	S ₁ 33°11'50" 127°16'20"	S ₁₀ 33°23'22" 127°09'43"
Day		23	23	23	23	23	23	22	23	23
Item	Time Z(m)	0915	0725	0535	0350	0205	0015	2230	1048	1220
T °C	0	20.50	20.10	19.70	19.70	19.50	18.50	18.50	20.00	20.00
	10	20.42	20.09	19.83	19.70	19.52	18.60	18.49	19.93	19.62
	25	19.82	19.71	19.41	19.32	17.61	18.42	18.00	19.65	18.28
	50	18.27	16.52	19.22	15.73	15.65	15.25	04.57	16.07	15.80
	100	—	15.53	15.53	14.73	14.09	—	—	15.28	14.65
	150	—	—	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—
	Botm.	15.44	15.39	14.79	14.69	14.06	14.94	13.87	15.26	14.55
S ‰	0	33.95	34.15	34.04	34.13	34.13	23.96	33.86	34.13	34.13
	10	33.95	34.13	34.04	34.13	34.13	34.02	33.86	34.13	34.13
	25	34.13	34.02	34.13	34.13	34.15	34.02	33.91	34.13	34.13
	50	34.31	34.31	34.20	34.24	43.31	34.13	34.04	34.22	34.15
	100	34.31	34.31	—	34.15	34.11	—	—	34.23	34.18
	150	—	—	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—
	Botm.	34.43	34.11	34.15	—	—	—	—	34.25	34.22
Depth (m)		118	110	102	112	111	98	96	110	107
Secchi (m)		19	20	—	—	—	—	—	—	—
Color		3	4	—	—	—	—	—	—	—
Sea		3	3	3	3	4	3	3	2	4
Swell		1	1	1	1	2	14	1	1	2
Air Temp. (°C)		19.4	19.0	18.3	18.0	16.8	17.0	17.5	18.9	17.2
Baro. (mm)		771	771	770	770	770	771	771	772	772
Wind		S. 1	S. 2	N. 2	N. 2	N. 3	N. 3	N. 3	S. 2	N. 5
Cloud		Cs. 9	Cs. 9	Cc. 8	Cl. 6	Cl. 5	Cs. 7	St. 7	Cl. 10	St. 8
Weather		C	C	C	BC	BC	BC	BC	R	C

③ July 1964						④ September 1964				
S_{11} 33°13'30" 127°02'20"	03	04	05	06	07	03	04	05	06	07
3	3	3	3	3	3	6	6	6	6	6
1040	1220	1410	1554	1740	1925	1430	1614	1750	1940	2125
21.60	23.50	23.40	23.80	23.20	22.80	28.50	29.30	29.00	28.10	28.50
20.37	23.02	22.70	22.74	22.48	22.83	27.76	26.62	28.10	28.13	28.22
19.38	18.98	20.23	19.05	20.41	16.03	25.72	27.60	27.10	27.65	27.27
16.59	14.85	13.07	12.26	11.90	12.69	16.12	14.19	14.23	15.50	15.82
—	—	—	11.85	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
15.18	14.05	12.98	12.08	11.80	12.47	14.42	14.30	14.34	14.25	13.87
34.30	33.61	32.50	32.39	32.50	32.39	30.59	30.01	29.83	29.47	29.65
33.50	32.61	32.52	32.43	32.54	34.24	31.18	31.22	29.89	29.36	29.72
33.68	33.17	32.88	32.76	32.57	33.12	32.81	33.10	32.21	32.94	31.53
34.18	34.18	33.84	33.66	33.60	33.80	33.75	33.64	32.94	33.15	32.30
—	—	—	—	32.70	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
34.18	34.18	33.91	33.68	33.62	33.82	33.93	33.62	33.80	33.80	33.64
108	108	104	109	115	105	105	100	102	107	98
14	23	21	17	16	14	20	18	19	—	—
3	3	3	3	4	4	3	3	3	—	—
2	2	2	2	1	3	4	3	4	5	5
1	1	1	2	2	3	2	2	2	3	3
24.0	25.0	24.9	25.0	24.6	24.2	29.9	29.1	29.3	27.2	26.8
772	774	774	774	774	772	773	773	773	773	773
SSW.3	SSW.3	SSW.2	SSW.4	SSW.2	SSW.4	W.2	W.2	W.3	W.4	W.3
St.9	Cb.9	Cc.10	Cb.10	F.10	F.10	St.6	Cu.3	St.3	Ci.3	Cc.4
C	C	C	C	C	C	BC	BC	BC	BC	BC

B. 313 선 해양 관측 성적

Oceanographic Data, Lnie 313

Date		① April 1964		② May 1964				③ July		④ September
Sta. No.		02	03	02	03	04	5 12	02	03	02
Day		26	25	22	22	22	22	3	3	7
Item	Time Z (m)	0015	2300	1655	1810	1922	2100	2330	2210	0020
T °C	0	15.50	15.50	18.80	18.40	18.20	18.50	22.80	22.60	27.70
	10	15.48	15.41	18.62	18.06	18.04	18.36	22.11	22.21	27.56
	25	15.03	15.21	18.25	17.61	16.88	17.72	18.92	20.50	18.60
	50	15.22	14.00	16.23	15.00	13.93	15.36	14.06	14.49	12.99
	100	—	—	—	—	—	—	—	—	—
	Botm.	14.45	13.79	16.13	14.32	13.87	14.58	13.69	14.31	12.83
S ‰	0	34.04	34.04	34.04	33.86	33.69	33.95	32.95	32.25	29.72
	10	34.05	34.05	34.04	33.87	33.69	33.95	33.03	32.61	29.85
	25	34.11	34.07	34.04	33.87	33.69	33.95	33.66	33.21	31.20
	50	34.11	34.07	34.07	34.02	33.93	34.02	34.07	34.11	33.50
	100	—	—	—	—	—	—	—	—	—
	Botm.	34.11	34.11	34.11	34.04	33.96	34.04	34.09	34.18	33.51
Depth (m)		81	85	80	88	97	99	96	95	87
Secchi (m)		—	—	17	19	17	—	—	—	—
Color		—	—	4	4	4	—	—	—	—
Sea		5	5	3	3	3	3	—	—	4
Swell		3	3	1	1	1	1	3	—	2
Air Temp. (°C)		15.6	16.0	18.4	17.2	17.2	17.0	23.9	23.9	26.0
Baro. (mm)		770	769	770	770	770	770	772	772	773
Wind		Sw. 6	S. 4	W. 2	W. 4	Nw. 4	N. 4	SSw. 4	SSw. 2	W. 3
Cloud		St. 8	Ci. 8	Cc. 7	St. 8	Ci. 8	Ci. 7	—	—	St. 3
Weather		C	C	BC	C	C	BC	C	C	BC

C. 312 선 해양 관측 성적

Oceanographic Data, Line 312

Date		① March 1964					② June 1963			
Sta. No.		02	03	04	05	06	02	03	04	05
Day		27	27	27	27	27	27	27	27	27
Item	Time Z(m)	1745	1635	1525	1420	1305	1900	1750	1645	1525
T °C	0	11.40	10.50	9.90	10.40	8.50	20.30	19.80	19.60	19.20
	10	10.88	10.32	9.44	9.85	7.96	19.30	19.53	18.50	18.00
	25	11.14	10.05	9.40	9.81	8.10	14.93	14.04	15.97	15.17
	50	11.05	9.90	9.36	9.81	8.97	13.73	13.43	14.54	14.14
	100	—	—	—	—	—	—	—	—	—
	Botm.	11.03	9.90	9.38	9.80	8.92	13.74	13.44	14.47	13.95
S ‰	0	34.60	34.27	34.13	34.14	33.64	33.42	33.48	33.68	33.60
	10	34.58	34.29	34.24	34.24	33.67	33.46	33.42	33.62	33.64
	25	34.51	34.27	34.11	34.24	33.66	34.09	34.00	34.02	34.07
	50	34.49	34.29	34.11	34.22	33.93	34.22	34.11	34.05	34.11
	100	—	—	—	—	—	—	—	—	—
	Botm.	34.52	34.29	34.09	34.27	33.93	34.24	34.11	34.09	34.13
Depth (m)		70	66	80	88	82	82	62	62	74
Secchi (m)		5.5	3	2.7	2.5	3.5	16	16	10	10
Color		—	—	—	—	—	—	—	—	—
Sea		3	3	3	3	3	3	3	3	3
Swell		3	3	3	3	3	3	3	3	3
Air Temp. (°C)		7.7	8.8	8.8	8.0	8.5	21.4	21.7	21.5	21.2
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		N.3	N.3	N.3	N.3	N.3	N.3	N.3	N.3	N.3
Cloud		10	4	3	—	—	Cl.4	Cl.4	F	F
Weather		C	BC	BC	B	B	C	C	C	C

Date		③ August 1964									
Sta. No.		06	07	02	03	04	05	06	07	03	03'
Day		27	27	25	25	25	24	24	24	14	13
Item	Time Z(m)	1410	1330	0455	0245	0123	0010	2305	2200	0010	2300
T °C	0	20.80	20.70	25.60	24.80	23.60	24.60	25.00	25.00	24.7	23.6
	10	19.73	20.23	24.90	24.62	21.95	24.22	24.70	24.40	23.43	21.20
	25	16.68	17.99	21.39	24.00	20.89	20.67	22.40	19.57	18.78	19.08
	50	15.87	15.17	14.35	15.49	18.36	16.28	17.20	16.78	18.17	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	13.17	12.83	12.68	13.44	14.09	12.57	12.05	12.65	16.60	15.53
S ‰	0	33.10	32.88	31.89	32.16	33.01	33.12	33.48	33.48	31.44	—
	10	33.40	33.06	31.74	32.30	34.44	33.15	33.33	33.30	31.65	—
	25	33.80	33.71	32.30	33.12	33.53	33.71	33.60	34.68	32.41	—
	50	33.96	34.11	33.89	34.11	33.68	34.07	34.16	33.84	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	34.07	34.07	34.00	34.25	34.74	34.82	34.40	34.16	33.20	—
Depth (m)		84	82	100	65	100	90	85	94	85	58
Secchi (m)		10	15	—	—	—	—	—	—	—	—
Color		—	—	—	—	—	—	—	—	—	—
Sea		3	3	3	3	3	3	4	4	2	2
Swell		3	3	2	2	2	2	3	3	3	3
Air Temp. (°C)		21.7	22.2	25.0	24.1	24.4	24.6	24.7	25.0	24.3	24.5
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		N.3	N.3	N.4	N.4	N.3	N.4	NW.4	NW.4	NW.3	NW.4
Cloud		F	F	Ci.3	Ci.3	Cc.3	Cu.6	Cu.7	Cu.7	Ns.10	Ns.8
Weather		C	C	B	B	BC	BC	BC	BC	C	C

④ September 1964			⑤ November 1964					⑥ December 1964				
04	05	06	02	03	04	05	06	02	03	04	05	06
13	13	13	15	15	15	15	15	19	19	19	19	19
2150	2025	1900	1840	1725	1600	1450	1330	2150	2030	1910	1755	1630
23.1	23.5	24.1	15.00	14.70	14.70	14.70	15.00	13.70	12.80	12.80	11.90	11.50
21.93	22.18	21.71	14.83	14.50	14.52	14.29	14.67	13.05	12.61	12.25	12.74	12.29
19.29	19.60	19.79	14.32	14.29	14.43	14.28	14.42	12.93	12.60	12.14	12.74	12.24
16.19	16.81	17.14	13.82	14.02	13.70	14.27	14.00	11.63	12.31	11.09	11.73	11.13
—	—	—	—	—	—	—	—	—	—	—	—	—
14.4	15.67	15.61	13.58	13.60	13.42	13.40	13.05	11.50	11.31	11.16	11.76	11.10
31.65	31.58	31.55	32.45	32.97	32.61	32.72	32.65	—	33.37	33.46	33.71	33.75
31.69	31.73	31.92	32.11	32.72	32.36	32.25	32.43	33.35	33.35	33.19	33.37	33.37
32.47	32.23	31.98	—	33.04	32.52	32.45	32.45	33.46	33.13	33.19	33.37	33.33
33.10	33.10	32.79	33.22	33.15	33.15	32.54	—	33.37	33.19	33.31	33.31	33.28
—	—	—	—	—	—	—	—	—	—	—	—	—
33.50	33.21	33.10	33.29	33.31	33.49	33.31	32.77	34.04	33.19	33.19	33.31	33.24
68	74	70	70	70	70	75	68	80	60	58	70	83
—	—	11	—	4	5	7	9	—	—	—	12	2
—	—	—	—	—	—	—	—	—	—	—	—	—
2	3	3	3	3	3	3	3	4	4	4	3	3
3	3	3	2	2	2	2	2	3	3	3	2	3
24.5	25.5	26.1	12.7	12.2	13.2	13.2	13.8	8.9	8.6	8.8	9.3	8.4
—	—	—	—	—	—	—	—	—	—	—	—	—
NW.3	NW.4	NW.3	NW.4	NW.4	NW.4	NW.4	NW.4	NW.4	W.4	W.4	W.4	W.4
Ns.10	Ns.10	Ns.10	Ns.4	Ns.4	Ns.3	Ns.3	Ns.3	Ns.10	Ns.10	Ns.10	Cs.6	Ci.8
C	C	C	BC	BC	BC	BC	BC	C	C	C	BC	C

D. 311 선 해양관측성적

Oceanographic Data, Line 311

Date		① March 1964						② April 1964		
Sta. No.		04	05	06	07	08	W ₃ 34°29' 10" 125°20' 20"	04	05	06
Day		26	26	24	24	24	26	8	8	9
Item	Time Z(m)	0810	0630	1940	1745	1622	0935	1420	1810	0740
T C	0	6.00	5.60	6.40	6.50	6.50	6.30	11.50	11.10	8.20
	10	6.12	6.32	6.47	6.62	6.46	6.22	10.80	9.79	7.54
	25	6.33	6.32	6.48	6.43	6.43	6.22	10.80	10.12	7.48
	50	—	6.35	6.51	6.73	6.41	7.29	—	10.65	7.53
	100	—	—	—	—	—	—	—	—	—
	Botm.	6.42	6.33	6.63	6.73	6.41	7.52	—	10.62	9.27
S ‰	0	33.45	32.97	33.13	33.22	33.21	32.85	33.98	33.77	33.93
	10	32.79	32.91	33.04	33.06	33.03	32.79	34.25	33.91	33.17
	25	32.86	32.89	33.06	33.08	33.03	32.86	34.34	34.07	33.19
	50	—	32.89	33.09	33.22	33.13	33.38	—	34.20	33.28
	100	—	—	—	—	—	—	—	—	—
	Botm.	32.92	32.95	33.22	33.17	33.04	33.49	—	34.25	33.87
Depth (m)		45	72	95	80	80	70	30	70	86
Secchi (m)		—	—	2	3.5	3	3	1.8	2.5	3
Color		—	—	—	—	—	—	—	—	—
Sea		2	2	5	5	5	2	0	0	0
Swell		3	3	3	3	3	3	1	1	1
Air Temp. (°C)		7.2	7.0	5.0	6.1	6.2	8.7	12.5	10.0	9.6
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		S.4	S.4	N.6	N.6	N.5	W.3	NW.2	N.3	NW.3
Cloud		0	0	St. 10	St. 10	St. 10	0	St. 9	St. 9	St. 4
Weather		B	B	C	C	C	B	C	C	BC

		③ June 1964									
07	80	04	05	06	07	08	09	W ₃ 34°29'10" 125°20'20"	W ₄ 34°17'25" 124°58'10"	04	05
9	9	27	27	25	25	25	25	27	27	21	21
0910	1005	0825	0620	2040	1900	1750	1640	1020	1150	1115	1230
8.10	11.20	20.20	16.70	19.30	20.20	21.60	21.40	18.40	18.00	24.60	25.20
7.54	—	18.90	16.50	17.62	18.72	20.25	20.67	17.60	18.78	24.45	24.92
7.44	8.35	17.29	16.49	17.00	17.29	15.85	17.48	16.87	17.90	—	20.67
7.39	8.77	—	16.49	15.88	14.63	10.19	9.88	16.09	—	—	18.74
—	—	—	—	—	—	—	—	—	—	—	—
8.16	8.95	17.19	16.50	14.76	10.48	9.69	9.37	16.08	5.67	20.75	15.51
33.28	33.06	33.64	33.96	33.86	33.77	33.17	33.06	33.77	33.42	—	33.10
33.30	—	33.73	33.98	33.80	33.71	33.15	33.10	33.80	33.44	34.46	33.55
33.28	33.50	33.95	33.95	33.91	33.84	33.96	33.68	34.04	33.68	—	33.69
33.26	33.62	—	34.02	33.96	34.07	33.51	33.50	34.04	—	—	33.53
—	—	—	—	—	—	—	—	—	—	—	—
33.57	33.51	33.80	34.95	33.96	33.50	33.46	33.44	33.96	33.95	34.40	34.22
84	80	35	73	86	78	92	96	62	58	28	74
3.2	4	7	3	—	13	15	16	13	8	13	16
—	—	—	—	—	—	—	—	—	—	—	—
0	2	3	3	2	3	3	3	3	3	4	4
1	1	3	3	1	2	2	2	3	3	2	2
10.5	10.2	20.5	19.9	19.6	22.1	21.5	23.7	20.9	22.2	28.7	28.8
—	—	—	—	—	—	—	—	—	—	—	—
NW.3	E.3	N.4	N.4	NE.2	NE.4	NE.4	NE.4	N.3	N.3	N.3	N.3
St.7	St.9	F	F.10	Ci.2	Ci.3	Ci.3	Ci.3	Ci.2	St.8	Cu.2	Cu.4
BC	C	C	C	B	B	B	B	B	C	B	B

Date		④ August 1964			⑤ September 1964					
Sta. No.		06	07	08	W_3 $34^{\circ}29'10''$ $125^{\circ}20'20''$					
Day		23	23	23	13	13	13	11	11	11
Item	Time Z(m)	0950	1120	1220	1600	1400	1300	1735	1610	1500
T °C	0	24.70	25.70	25.50	22.80	25.30	25.5	20.60	26.90	26.80
	10	24.47	24.47	25.22	21.71	22.63	23.50	20.50	26.72	26.48
	25	21.06	23.09	23.18	20.80	21.79	21.18	20.41	20.75	21.97
	50	15.63	14.99	13.03	—	—	20.47	20.00	10.83	11.83
	100	—	—	—	—	—	—	—	—	—
	Botm.	15.15	13.18	11.63	19.08	19.37	17.32	15.68	10.63	10.22
S ‰	0	33.31	32.95	33.17	32.05	31.65	31.80	31.02	31.56	31.15
	10	—	33.15	33.08	32.60	31.97	31.74	32.25	31.55	31.09
	25	33.51	—	33.28	32.23	32.10	32.12	32.21	32.85	32.11
	50	29.92	34.63	34.20	—	—	23.29	32.41	33.24	33.21
	100	—	—	—	—	—	—	—	—	—
	Botm.	34.18	34.25	34.60	32.52	32.45	32.72	32.93	33.22	33.19
Depth (m)		90	70	78	55	36	74	85	87	85
Secchi (m)		27	20	15	8	13	14	7	19	23
Color		—	—	—	—	—	—	—	—	—
Sea		2	3	3	4	3	2	2	4	4
Swell		2	3	3	3	3	2	1	2	2
Air Temp. (°C)		26.4	27.0	27.0	26.5	26.5	27.0	26.5	26.6	26.5
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		NW.3	NW.3	NW.3	NW.5	NW.3	NNW.3	SE.3	SE.5	SE.5
Cloud		As.10	As.10	As.10	Ns.10	Ns.4	Ci.4	Ci.1	Ci.1	Ci.2
Weather		C	C	C	C	BC	BC	B	B	B

⑥ November 1964							⑦ December 1964				
04	05	06	07	08	W ₃ 34°29' 10" 125°20' 20"	W ₄ 34°17' 25" 124°58' 10"	04	05	06	07	W ₄ 34°17' 25" 124°58' 10"
9	11	11	11	11	15	15	19	19	19	19	19
1735	0725	0830	1000	1130	1000	1110	0845	0740	1110	1240	1500
15.70	14.90	15.70	15.80	16.10	15.00	15.00	10.70	11.40	11.50	11.70	11.70
15.83	14.72	15.44	15.68	16.50	14.81	14.75	10.13	11.18	11.27	11.27	12.24
15.62	14.72	15.22	15.10	15.58	14.60	14.68	10.21	11.22	11.32	11.37	11.83
—	14.66	13.61	14.91	12.87	—	14.52	—	11.19	11.29	11.30	11.08
—	—	—	—	—	—	—	—	—	—	—	—
15.69	14.63	12.67	12.84	10.13	14.10	14.15	10.31	11.18	11.33	11.31	11.10
32.48	—	32.52	32.54	32.39	33.40	33.40	32.99	32.74	32.92	33.12	33.08
32.32	32.30	32.27	32.52	32.18	32.47	32.41	32.99	32.76	33.01	33.13	33.08
32.34	32.36	32.29	32.52	32.18	32.50	32.45	33.01	33.01	33.01	33.17	32.86
—	32.38	32.54	32.52	32.79	—	32.68	—	33.01	33.01	33.19	33.19
—	—	—	—	—	—	—	—	—	—	—	—
32.34	32.39	32.74	32.57	33.02	32.63	32.81	33.01	33.01	33.03	33.19	33.17
36	68	74	86	70	56	68	32	75	85	80	60
3	7	12	13	16	11	12	1.5	2	1.6	1	1.5
—	—	—	—	—	—	—	—	—	—	—	—
3	2	3	3	4	3	3	2	2	2	3	3
2	1	2	3	3	2	2	3	3	3	3	3
14.8	13.4	15.1	15.9	15.2	13.7	13.7	7.2	7.2	7.4	8.0	9.4
—	—	—	—	—	—	—	—	—	—	—	—
N. 3	E. 2	SW. 5	SW. 4	SW. 5	NW. 4	NW. 4	W. 4	W. 3	W. 4	W. 4	W. 4
Ns. 4	Ns. 4	Ns. 3	Ns. 3	Ns. 9	Ci. 2	Ns. 3	Ns. 10	Ns. 10	Ns. 10	Ns. 10	Ci. 8
BC	BC	BC	BC	C	B	BC	C	C	C	C	C

③ June 1964					④ August 1964				⑤ September 1964			
05	06	07	08	W ₂ 35°00'50" 124°42'40"	03	04	05	06	03	04	05	06
25	25	25	25	25	20	20	20	20	11	11	11	11
0920	1010	1200	1315	1500	1955	1850	1745	1645	0630	0735	0845	0955
20.00	20.70	21.20	21.80	21.40	27.10	27.40	27.40	27.20	25.0	24.1	24.9	25.2
18.90	19.21	20.03	21.23	20.83	26.51	26.90	26.80	26.88	24.70	23.31	24.45	24.84
18.24	15.96	15.98	16.47	16.27	—	22.57	22.85	22.47	—	21.80	20.74	19.56
—	—	14.94	13.69	13.91	—	—	—	—	—	—	—	18.24
—	—	—	—	—	—	—	—	—	—	—	—	—
17.11	15.57	14.74	13.33	13.04	22.04	17.57	17.28	16.69	23.20	20.88	19.35	18.05
—	33.95	33.78	33.21	33.59	33.84	34.02	33.69	33.69	32.07	31.80	31.78	30.75
33.95	33.95	33.86	33.19	33.62	33.48	33.51	33.50	33.48	31.85	31.83	31.74	30.73
33.95	33.96	33.98	33.91	33.86	—	34.00	33.82	33.60	—	32.30	32.54	32.79
—	—	33.98	33.93	33.93	—	—	—	—	—	—	—	33.03
—	—	—	—	—	—	—	—	—	—	—	—	—
—	33.96	33.96	33.93	33.89	33.86	34.22	34.22	—	32.02	32.36	32.86	33.10
56	55	73	82	72	20	46	42	54	24	48	50	64
7	12	13	13	14	17	28	25	27	2.5	3.5	14	15
—	—	—	—	—	—	—	—	—	—	—	—	—
0	2	3	3	3	6	6	6	6	3	2	2	2
0	0	1	1	1	2	3	3	2	1	1	1	1
22.7	21.7	22.8	22.7	22.4	26.7	27.5	26.5	27.0	24.3	25.1	26.3	26.0
—	—	—	—	—	—	—	—	—	—	—	—	—
NW.2	NW.2	NW.2	NW.2	N.4	N.4	N.4	N.4	N.4	S.3	S.3	S.2	S.3
Ci.3	Ci.3	Ci.2	Ci.2	Ci.2	Ci.3	Ci.3	Cu.3	Ci.3	Cu.3	Ci.3	Ci.3	Ci.3
BC	B	B	B	B	BC	BC	BC	BC	BC	BC	BC	BC

Date					⑥ December 1964						
Sta. No.		07	08	W ₂	03	04	05	06	07	08	W ₂ 35°00'50" 124°42'40"
Day		11	11	11	17	17	17	17	17	17	17
Item	Time Z(m)	1100	1210	1340	0715	0820	0928	1035	1150	1250	1440
T °C	0	26.8	26.9	27.1	10.70	11.60	11.70	11.40	11.30	11.40	11.40
	10	26.60	26.61	22.83	10.41	11.18	11.46	10.97	10.90	10.80	10.69
	25	21.07	20.87	22.38	—	10.30	11.46	10.92	10.90	10.85	10.82
	50	16.39	13.19	22.22	—	—	—	—	10.83	10.94	10.68
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	14.63	12.54	11.76	10.48	10.08	11.40	10.94	10.80	10.30	10.70
S ‰	0	31.58	31.44	31.53	33.39	33.37	33.37	33.35	33.19	33.19	32.88
	10	31.44	31.40	31.49	33.26	33.28	32.92	32.95	33.03	32.97	32.86
	25	32.48	32.37	31.96	—	33.19	32.92	32.92	33.01	32.97	33.08
	50	33.15	33.42	33.37	—	—	—	—	32.95	32.94	33.10
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	33.33	33.46	33.30	33.26	33.17	32.92	32.92	32.95	32.94	33.10
Depth (m)		72	78	74	20	50	52	54	72	82	73
Secchi (m)		20	14	21	1.5	2	2	4	10	12	—
Color		—	—	—	—	—	—	—	—	—	—
Sea		4	4	4	2	2	2	2	2	3	3
Swell		1	1	—	1	1	1	1	1	3	3
Air Temp. (°C)		26.3	26.3	26.3	7.2	8.3	9.7	9.8	10.0	10.4	10.4
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		S. 3	SE. 4	SE. 4	SE. 2	S. 2	S. 2	SW. 2	W. 3	W. 5	W. 6
Cloud		Ci. 2	Ci. 2	Ci. 7	Cs. 2	Cs. 2	Cs. 3	Ci. 2	Ns. 10	Ci. 8	Ci. 7
Weather		B	B	B	B	B	BC	B	C	C	C

Date		③ April 1964								
Sta. No.		125°40'50" 37°09'00" Kulop ₁	125°30'25" 37°09'00" Kulop ₂	125°20'00" 37°00'00" Kulop ₃	125°09'00" 37°07'00" Kulop ₄	01	02	03	01	02
Day		02	22	22	22	23	23	23	24	24
Item	Time Z(m)	1440	1610	1710	1930	1640	1135	1040	0758	0635
T °C	0	8.20	8.00	8.20	9.20	11.10	9.30	9.90	19.20	19.60
	10	6.62	6.72	7.41	8.94	—	8.56	8.35	17.09	17.60
	25	6.63	6.43	6.42	5.92	—	7.95	7.63	16.09	—
	50	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—
	Botm.	6.62	6.40	6.22	5.90	9.54	7.69	7.54	15.99	16.20
S ‰	0	31.80	32.00	—	32.21	32.11	32.48	32.79	31.74	32.11
	10	31.89	32.07	32.09	32.25	—	32.72	32.83	31.89	32.45
	25	31.91	32.18	32.09	32.34	—	32.70	32.88	32.34	—
	50	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—
	Botm.	31.91	32.23	—	32.38	32.43	32.70	32.92	32.32	32.81
Depth (m)		50	46	50	44	16	40	40	32	32
Secchi (m)		2	4	5	—	3	6	6.2	—	—
Color		—	—	—	—	—	—	—	—	—
Sea		2	2	3	3	2	1	1	2	2
Swell		3	3	3	3	2	2	2	1	1
Air Temp. (°C)		10.6	10.5	10.2	9.0	11.5	11.5	11.7	19.3	19.5
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		NW.3	W.2	NW.3	NW.3	NW.2	SW.1	0	N.1	S.2
Cloud		3	0	0	0	9	9	4	0	0
Weather		BC	B	B	B	C	C	BC	B	B

④ March 1964					⑤ August 1964					⑥ September 1964			
03	04	05	06	07	01	02	03	04	05	01	02	03	04
24	24	24	24	24	20	20	20	20	20	10	10	10	10
0525	0415	0250	0125	0010	1010	1125	1225	1340	1440	2100	1950	1800	1740
19.80	21.30	21.80	21.30	21.60	26.80	26.30	26.70	26.60	26.60	25.1	25.3	25.3	25.0
19.83	19.31	20.03	21.30	21.12	25.98	25.80	26.20	26.31	25.92	34.93	24.70	25.11	24.50
15.86	14.72	14.02	14.08	12.80	—	—	22.65	23.98	22.67	24.02	23.10	22.39	21.38
—	—	—	11.89	11.28	—	—	—	—	19.77	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
15.68	14.62	11.58	11.90	9.34	24.6	22.28	21.48	20.03	17.31	23.90	22.75	21.69	20.58
32.45	—	33.40	32.85	32.57	33.59	33.37	33.06	34.20	33.13	32.38	32.56	31.96	32.25
32.65	33.57	33.59	32.76	32.77	33.08	33.15	32.90	33.33	32.92	32.45	32.57	32.02	32.94
32.01	33.60	33.59	32.81	33.62	—	—	33.66	33.51	33.59	32.59	32.70	32.83	33.01
—	—	—	32.42	33.39	—	—	—	—	33.89	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
33.03	33.62	33.39	33.39	33.10	33.42	33.48	33.87	34.22	34.11	32.59	32.72	32.97	33.06
35	57	56	68	72	22	31	43	44	60	35	35	40	45
—	—	—	—	—	74	9	27	23	28	—	—	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	3	3	3	3	3	3	3	3	6	2	2	2	2
1	2	2	2	2	1	1	1	1	2	1	2	2	1
19.7	20.6	20.7	20.7	20.5	26.3	28.1	27	27.3	26.7	24.4	24.5	24.5	24.5
—	—	—	—	—	—	—	—	—	—	—	—	—	—
S.2	S.2	N.2	SW.2	NW.2	NE.3	E.3	N.3	N.4	N.4	NW.2	NW.2	N.2	N.3
0	Ns.1	Ns.1	Ns.1	s.1	Cu.4	Cu.4	Cu.3	Ci.4	Ci.3	Ci.9	Ci.7	Ci.10	Ci.10
B	B	B	B	B	BC	BC	BC	BC	BC	C	BC	0	C

Date					⑦ December 1964						
Sta. No.		05	06	07	01	02	03	04	05	06	07
Day		10	10	10	16	16	16	16	16	16	16
Item	Time	1635	1535	1430	2250	2135	2030	1925	1815	1710	1600
	Z (m)										
T °C	0	25.6	26.0	26.3	11.70	11.30	11.40	11.60	11.15	11.40	11.00
	10	25.45	25.12	25.81	10.42	11.04	11.34	11.52	11.27	11.16	10.49
	25	19.87	20.47	21.72	10.40	11.11	11.42	11.49	11.29	11.12	10.79
	50	19.58	19.12	17.97	—	—	—	—	—	11.16	10.91
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	19.46	18.43	17.34	10.51	11.12	11.35	11.52	11.30	11.13	10.80
S ‰	0	31.81	31.58	31.55	33.21	33.35	33.35	33.19	33.39	33.46	33.53
	10	31.69	31.65	31.47	33.19	33.24	33.19	33.17	33.28	32.92	33.21
	25	33.10	32.92	32.74	33.13	33.10	33.06	33.10	33.15	33.19	33.30
	50	33.17	33.12	33.33	—	—	—	—	—	33.19	32.92
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	33.17	33.24	33.33	33.12	—	33.06	33.10	34.05	33.19	32.92
Depth (m)		70	68	63	32	39	45	40	54	63	70
Secchi (m)		16	16	17	—	—	—	—	—	11	12
Color		—	—	—	—	—	—	—	—	—	—
Sea		2	2	2	1	2	2	2	3	2	3
Swell		2	2	2	1	1	1	2	2	1	2
Air Temp. (°C)		25.5	26.5	26.8	7.2	7.2	7.5	7.7	8.1	8.9	8.9
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		N.3	N.3	N.2	NE.2	NE.2	E.2	E.2	E.2	E.2	E.3
Cloud		Ci.9	Ci.9	Ci.7	Ci.4	Ci.3	Ci.8	Ci.6	Ci.8	Ci.8	Ci.8
Weather		C	C	BC	BC	BC	C	C	C	C	C

G. 308 선 해양 관측 성적

Oceanographic Data, Line 308

Date		① March 1964					② April 1964	
Sta. No.		01	02	03	04	05	02	03
Day		22	22	22	22	22	23	23
Item	Time Z(m)	0906	1030	1143	1255	1410	0730	0830
T ℃	0	4.00	4.20	4.80	5.00	5.10	9.30	8.70
	10	4.15	4.16	4.90	5.04	5.17	8.47	7.94
	25	—	—	4.90	4.92	5.12	—	7.53
	50	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—
	Botm.	4.14	4.15	5.04	4.90	5.10	8.15	6.83
S ‰	0	32.30	32.41	32.52	32.66	32.73	31.91	32.38
	10	32.43	32.24	32.54	32.59	32.56	32.07	34.43
	25	—	—	32.59	32.59	32.65	—	32.50
	50	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—
	Botm.	32.29	32.30	32.56	32.54	32.56	32.20	32.56
Depth (m)		23	30	50	50	40	24	48
Secchi (m)		1	1.2	3.5	3.8	4.5	5	4
Color		—	—	—	—	—	—	—
Sea		3	3	3	3	3	1	1
Swell		3	3	3	3	3	1	1
Air Temp. (°C)		5.3	5.1	6.5	6.5	6.6	9.5	10.5
Baro. (mm)		—	—	—	—	—	—	—
Wind		NW. 4	NW. 4	NW. 4	NW. 4	NW. 4	NE. 1	W. 1
Cloud		0	0	0	0	0	2	St. 3
Weather		B	B	B	B	B	B	B

Date		③ June 1964							
Sta. No.		01	02	03	04	05	06	07	W ₁ 36°09'00" 125°00'00"
Day		23	23	23	23	23	23	23	23
Item	Time Z(m)	1425	1530	1640	1800	1920	2010	2130	2240
T °C	0	19.20	19.60	21.20	21.20	21.70	21.20	21.20	21.70
	10	18.01	15.58	16.57	21.01	20.24	20.23	19.90	20.10
	25	—	—	14.17	8.84	8.55	8.55	8.23	9.68
	50	—	—	—	—	—	8.24	8.15	—
	100	—	—	—	—	—	—	—	—
	Botm.	16.38	13.57	9.04	8.85	8.5	7.17	8.15	8.67
S ‰	0	31.96	32.79	32.45	32.30	32.25	32.23	31.25	32.32
	10	31.92	32.52	32.95	32.23	32.21	32.54	32.20	32.32
	25	—	—	33.40	32.88	32.88	32.95	32.88	32.20
	50	—	—	—	—	—	32.90	32.88	—
	100	—	—	—	—	—	—	—	—
	Botm.	31.71	32.57	32.79	32.88	32.94	32.92	32.88	32.99
Depth (m)		22	28	45	45	52	65	—	—
Secchi (m)		7.5	9	6	17	—	—	—	—
Color		—	—	—	—	—	—	—	—
Sea		1	1	1	2	2	2	2	2
Swell		1	1	2	2	2	2	2	2
Air Temp. (°C)		19.7	19.6	20.8	21.1	20.7	20.7	20.7	20.6
Baro. (mm)		—	—	—	—	—	—	—	—
Wind		S. 2	N. 2	SW. 2	SW. 2	NW. 2	NW. 2	SW. 2	NW. 2
Cloud		Ns. 1	Ns. 1	NS. 1	Ns. 1	NS. 1	Ns. 1	Ns. 1	Ns. 1
Weather		B	B	B	B	B	B	B	B

④ September 1964

01	02	03	04	05	06	07	W ₁ 36°09'00" 125°00'00"
10	10	10	10	10	10	10	10
0600	0710	0810	0915	1015	1120	1200	1310
25.4	23.7	23.9	25.1	25.2	25.3	25.2	25.7
24.12	23.62	23.73	25.00	24.92	25.22	25.20	25.50
—	—	22.50	19.70	20.28	20.27	20.07	21.17
—	—	—	—	—	18.46	17.02	17.54
—	—	—	—	—	—	—	—
23.90	22.00	20.39	19.68	19.58	18.35	17.02	17.42
—	—	32.65	32.12	32.11	32.09	32.03	31.58
—	—	32.61	31.91	32.12	32.07	32.11	31.50
—	—	33.00	33.33	34.04	32.99	32.92	32.86
—	—	—	—	—	33.62	33.46	33.42
—	—	—	—	—	—	—	—
—	—	33.08	33.33	33.51	33.40	33.44	33.40
23	30	50	53	54	62	65	63
6	5	6	13	15	16	15	15
—	—	—	—	—	—	—	—
3	4	4	4	3	2	2	2
3	3	3	3	3	2	2	1
23.7	23.7	23.7	24.0	24.6	24.0	25.2	25.4
—	—	—	—	—	—	—	—
NW.4	N.3	N.4	N.4	N.3	N.2	N.2	N.2
Ci.3	Ci.5	Ci.8	Cu.9	Ci.8	Ci.9	Ci.8	Ci.6
BC	B	C	C	C	C	C	BC

Date		⑤ December 1964							
Sta. No.		01	02	03	04	05	06	07	W ₁ 36°09'00" 125°00'00"
Day		16	16	16	16	16	16	16	16
Item	Time Z(m)	0640	0755	0905	1010	1120	1235	1340	1500
T °C	0	11.20	10.80	11.50	11.70	11.70	11.35	11.20	11.00
	10	10.71	10.68	11.10	11.50	11.41	11.17	10.82	10.78
	25	—	—	11.39	11.56	11.39	11.17	10.94	10.74
	50	—	—	—	—	—	11.18	10.86	10.70
	100	—	—	—	—	—	—	—	—
	Botm.	10.72	10.66	11.41	11.61	11.61	11.20	10.80	10.71
S ‰	0	33.31	33.35	33.37	33.50	33.53	33.50	33.39	33.37
	10	33.19	33.17	33.21	33.26	33.17	33.21	33.37	33.26
	25	—	—	33.21	33.28	33.28	33.31	33.37	33.21
	50	—	—	—	—	—	33.30	33.39	33.17
	100	—	—	—	—	—	—	—	—
	Botm.	33.19	33.21	33.21	33.28	33.24	33.30	33.39	33.17
Depth (m)		18	24	50	50	52	63	65	60
Secchi (m)		3	4	3	4	7	8	7	10
Color		—	—	—	—	—	—	—	—
Sea		2	2	3	3	3	3	3	3
Swell		2	2	2	2	2	2	2	2
Air Temp. (°C)		7.0	6.8	7.4	7.4	8.2	8.3	8.4	8.6
Baro. (mm)		—	—	—	—	—	—	—	—
Wind		SE. 3	SE. 3	SE. 4	SE. 4	SE. 4	SE. 4	E. 3	E. 3
Cloud		Ns. 8	Ns. 8	Ns. 8	Ns. 10	Ns. 10	Ns. 10	Cl. 9	Cl. 10
Weather		C	C	C	C	C	C	C	C

부 유 생 물 조 사 성 적

PLANKTON DATA

1 9 6 4

浮游生物調査

本場 및 支場에서 海洋觀測時 採集한 資料를 檢索 調査한 結果는 다음과 같다.

1. 採集網 및 方法

採集網은 海洋調査年報 第11號와 같이 中井式 Plankton Net (特 B型) 을 使用하여 定量 採集하였으며 採集方法은 水深 50 m에서 表面까지 1~2分間の 速度로서 垂直 採集하여 5%의 ホルマリン으로 固定하였다.

2. 採集된 試料의 處理方法

上記 Net 로서 採集한 試料에 對해서 大型인 水母類 및 甲殼類를 除去하고 重量法에 依하여 濕重量을 測定한後 標本分割器로서 等分割하였으며 分割한 그 一部分을 摘出하여 顯微鏡下에서 檢索 計數하였다.

Plankton Collections

Plankton samples were collected at the hydrographic stations of sectional lines in the adjacent seas of Korea. The results are as follows.

1. Plankton Net used for vertical haul:

NAKAI'S Plankton Net (MARUTOKU Net—"B") ; Mouth diameter 45 cm, front section length 15 cm of canvas material, bag-length 86 cm, conical shape, material Müllergage No. GG. 54. The net was hauled from the depth of 50 m to the surface for one or two minutes at each station. Samples were settled with 5 percent Formalin, and brought to the laboratory for examination.

2. Method of Analysis;

Samples were collected with above mentioned plankton net and measured as wet weight, but large planktons, such as Hydromedusae, Scyphomedusae, Salpa and Doliolum, were excepted.

The subsamples were made by whirling apparatus, then the species were counted with microscope.

A. 106선 부유생물 조사성적

Plankton Data, Line 106, 1964

Month	July				October	
Station	02	04	06	08	02	04
Date	15	15	15	15	4	4
Time	06.35	08.00	12.00	15.55	13.40	15.10
Collected depth	50	50	50	50	50	50
Volume (cc)	2.2	2.6	6.0	5.0	0.6	0.5
Biomass (mg/m ³)	25.7	50.8	116	103	2.7	7.8
Rate of subsample	1/2	1/4	1/4	1/2	—	—
No. of total organisms	553	755	554	460	182	240
No. of total the other organisms	—	—	—	—	—	—
ZOOPLAKTON						
Calanus finmarchicus		83	28	67		
C. tenuicornis	20	16	89	4		20
C. cristatus			3			
C. plumchrus						8
C. pauper						1
C. helgolandicus						1
Eucalanus attenuatus			6			
Paracalanus parvus	30	25	99	207	6	7
Acrocalanus gracilis					21	27
A. gibber					31	6
Clausocalanus arcuicornis				1		
Ctenocalanus longicornis						10
Pseudocalanus minutus	55	258	74			15
Euchaeta marina			2			
E. marina juv			7			
Scolecithricella minor		23	21			11
Centropages bradyi			5			
Metridia lucens		193	23			1
Labidocera japonica	1					
Acartia clausi	3		1	10		
Tortanus discaudatus	34	1				
Oithona flumifera	52	30	49	37		15
O. larvae					4	
Oncaea venusta						
Corycaeus japonicus						1
C. spp			9	8		
Copepoda larvae	24	54	45	41	27	25
C. napulius larvae	4					
C. sp						2
Euphausia larvae	15		8			
Nyctiphanes australis						2
Parathemisto sp	2	28	26	5	2	6
Sagitta larvae	97	6	2	70		
S. sp					86	32
Oikopleura fusiformis		1	18	1		
O. dioica			25			
O. sp			5		4	50
Podon Schmackeri	21					
Penilia schmackeri	1					
Conchoecia sp				2		
Muggiaea atlantica			1			
Evadne tergestina	72	5				
E. nordmanni	20					
Ophiopluteus larvae	12					
Fritillaria haplostoma	2					
Balanus larvae			1			
Bivalves larvae			2			
Thalassinid sp	4					
Polychaeta larvae	1					
Idya furcata	29					
Pelagic egg	6	5	1	1		
Fish larvae		2				
Engraulis japonicus egg	48	5				

B. 105선 부유생물 조사성적

Plankton Data, Line 105, 1964

Month	March				July	
	03	05	07	09	03	05
Station	25	25	25	25	16	16
Date	06.55	09.45	13.35	17.25	05.00	06.50
Time	50	50	50	50	50	50
Collected depth	8.5	9.5	18.0	25.0	1.0	1.1
Volume (cc)	200.5	190.6	560	170.9	19.9	17.3
Biomass (mg/m ³)	1/16	1/16	1/32	1/4	1/2	—
Rate of subsample	393	644	1,774	769	841	675
No. of total organism	9	—	1	—	—	15
No. of total the other organism						

ZOOPLANKTON						
Calanus finmarchi						21
C. tenuicornis	2	21		20	18	20
Undinula darwinii				6		
Calanus plumchrus						
C. cristatus						
C. helgolandicus						
C. pauper						
C. longicornis						
C. gracilis						
Undinula vulgaris						
Calanus robustior						
C. plumchrus larvae	27	86	32	111		
C. larvae						
C. sp						
Eucalanus attenuatus						
E. larvae						
E. sp	1					
Paracalanus parvus	25	6	3	50	78	17
P. aculeatus						
Acrocalanus gracilis						
A. gibber						
A. longicornis						
Clausocalanus pergens						
C. pavo						
Ctenocalanus longicornis						
Pseudocalanus minutus	235	443	1381	442	152	192
P. gracilis		13		4		
Euchaeta marina						
E. japonica						
E. flava						
E. larvae						
E. marina juv	1					
Scolecithricella minor		3		2		32
S. bradyi						
Centropages abdominalis					1	
C. bradyi						
C. furcatus						
Temora discaudata						
T. turbinata						
T. stylifera						
Metridia lucens	1	3		21		189
Candacia bipinnata						
C. curta						
C. sp						
Labidocera japonica						1
Acartia clausi						
A. spinicauda						

		October				December		
07	09	03	05	07	09	03	06	09
16	15	3	3	3	3	13	13	13
00.50	20.15	8.40	16.40	12.25	08.00	05.30	09.50	16.20
50	50	50	50	50	50	50	50	50
7.0	3.0	16.0	0.5	2.5	4.0	16.0	3.5	4.5
140.6	51.7	140.1	2	39.9	33.3	718	176.1	109.5
1/4	1/4	1/8	—	1/8	1/4	1/14	1/2	1/16
621	805	285	79	435	323	378	377	311
—	1	—	—	—	14	—	—	2

150	1		2	16	1	1		1
		2			1	14	3	6
2			17	2				2
10	39	2		11	8	10	3	12
		15			2			
			1	1				
		1				3		
						7	20	
3	3							4
		3		1	14			
161	610				2	228	232	102
	3	15		5	5			3
			15	57	7	58	43	7
		20	1	59	34			
1	1							13
14	18	20		17	19	27	21	41
34			2	41	3			3
3						12	5	1
7								
							1	
		3		1	14			
13		5	1	7	4		1	
1								
	1				1			
		1		4				11
		1						
		4						
		3						
17	1					1		
	4							
		2						
1								1
1								
		7						

Month	March				July	
	03	05	07	09	03	05
Station	25	25	25	25	16	16
Date	06.55	09.45	13.35	17.25	05.00	06.50
Time	50	50	50	50	50	50
Collected depth	8.5	9.5	18.0	25.0	1.0	1.1
Volume (cc)	200.5	190.6	560	170.9	19.9	17.3
Biomass (mg/m ³)	1/16	1/16	1/32	1/4	1/2	—
Rate of subsample	393	644	1,774	769	841	675
No. of total organisms	9	—	1	—	—	15
No. of total the organisms						
ZOOPLANKTON						
A. danae						
A. juv						
A. sp					16	
Tortanus discaudatus					30	32
Oithona plumifera	10	21	37	21		
O. larvae						
Setella gracilis						
Oncaea venusta						
Corycaeus japonicus						
C. catus						
C. spp		1		1		2
Copepoda larvae	76	35	18	78		26
Copepoda nauplius larvae					50	
Euphausia larvae					38	3
E. sp						
Lucifer hanseni						
L. hanseni larvae						
Nyctiphanes australis		2				
Parathemisto sp	9	7	2	4	3	78
Sagitta Bipunctata						
S. larvae	4	3		9	133	6
S. sp	1					
Oikopleura fusiformis					2	23
O. sp						
Podon Schmackeri					13	
Penilia schmackeri					1	
Conchoesia elongans						
C. sp						
Muggiaea atlantica						
M. sp						
Evadne tergestina					10	
E. nordmanni					141	
Doliolum sp						
Balanus larvae						
Polychaeta larvae					1	
P. sp						
Brachyscelus larvae	1					
Engraulis japonicus egg					68	7
Pelagic egg					3	10
Gastropoda larvae						1
Lucicutia flavicornis						
Sapphirina angusta						
S. spinicauda						
Lingula larvae						
Salpa sp						
Fish larvae					17	

July		October				December		
07	09	03	05	07	09	03	06	09
16	15	3	3	3	3	13	13	13
00.50	20.15	8.40	16.40	12.25	08.00	05.30	09.50	16.20
50	50	50	50	50	50	50	50	50
7.0	3.0	16.0	0.5	2.5	4.0	16.0	3.5	4.5
140.6	51.7	140.1	2	39.9	33.3	718	176.1	109.5
1/4	1/4	1/8	—	1/8	1/4	1/14	1/2	1/16
621	805	285	79	435	323	378	377	311
—	1	—	—	—	14	—	—	2

		1				1		
		1				1	6	
21	16	13	5	45	42	4	26	15
		10						
	11	1	7	1	3			
		33	1	7	13		1	20
		5		3	8	1	1	3
							1	
7	12							
8	7	34	10	70	20	3	1	8
	1							
2								
	2					3	1	6
		1						
		12			14			
58	16	2	6	2	8	1		6
1								
7	36	13	15	6	33			
							4	10
97	4							
	2	18	3	80	9	1	4	25
		3						
		1						
1	1	2						
		2			4			
								2
		2						
	1							
		3						
		1						
		16		1	40		2	7
	2							
	1							
		1						
		1						
		3						
		1						
1	3	1						

C. 104선 부유생물 조사성적

Plankton Data, Line 104, 1964

Month	March				July	
Station	04	06	08	10	04	06
Date	29	29	29	28	16	16
Time	18.50	16.10	12.00	10.30	12.15	14.30
Collected depth	50	50	50	50	50	50
Volume (cc)	5.0	8.9	5.2	46.5	2.4	6.0
Biomass (mg/m ³)	130.2	200.9	210.5	990.9	21.9	58.5
Rate of subsample	1/16	1/16	1/16	1/32	1/4	1/16
No. of total organisms	718	545	989	690	820	531
No. of total the other organisms	9	2	—	—	—	—
ZOOPLANKTON						
Calanus helgolandicus						10
C. finmarchicus						
C. tenuicornis	6	3	16	6	9	27
C. plumchrus					1	
Undinula darwinii						
U. vulgaris						
Calanus robustior						
C. larvae						
C. plumchrus larvae	13	41	26	128		
Eucalanus subcrassus						
E. larvae						
E. sp						
Paracalanus parvus	16	129	73	8	101	32
P. aculeatus						
Acrocalanus gracilis						285
A. gibber						
A. longicornis						
Calocalanus pavo						
Clausocalanus pergens			2			
C. arcuicornis		5	7			
Ctenocalanus longicornis	12	2	6			5
Pseudocalanus gracilis				2		
P. minutus	504	250	611	452	472	9
Euchaeta japonica						
E. marina						
E. larvae						
Scolecithricella minor			1	8		6
S. orientalis			1			
Centropages abdominalis			1		1	
C. longicornis						1
C. gracilis						
C. furcatus						
Temora discaudata						
T. turbinata						
Metridia lucens	17		48		1	
M. lucens larvae						
Candacia bipinnata						
C. curta						
C. jub						1
Labidocera bipinnata						
Acartia clausi		1	1			1
A. spinicauda						
A. danae						
A. longicornis						
A. erythraeae						
A. larvae						
Oithona plumifera	26	6	56	15	22	18

		October				December		
08	10	04	06	08	10	04	07	10
16	16	2	2	2	2	8	7	5
08.00	21.30	06.25	08.30	11.35	16.20	03.55	22.55	21.05
50	50	50	05	50	50	50	50	50
3.8	4.8	12	1.0	2.5	10	2.3	3.0	4.0
86	85	16	7.9	23	70	65.7	85.7	94.5
1/16	1/16	1/2	—	1/8	1/4	1/32	1/32	1/8
495	614	466	816	399	586	338	319	250
—	1	—	1	—	—	—	5	44
30	7	4	11	12		3	2	1
86	3	3	1				1	1
		1	4	16	1			
		3					1	
					1			1
						5	4	
						4	11	
	1							
				1	7		3	3
117	88	5	1	2	2	111	165	63
49	121			1	2		1	9
		20	46	63	1	48	36	7
		43	134	149	7			
							3	3
	1				1	65	9	1
								21
2	9			2	6	3	3	
14	1	89	48	23	1	22	2	
							1	
								2
13	1	10	3	8	3			5
					4			
					4			
	1							
	2	2					2	
							1	
	7	2						
								1
			1					
	1							
		1		5	7	2		
					5			
						5		
							1	
4	5	3		2	7			1
			39	38		23		29

Month	March				July	
Station	04	06	08	10	04	06
Date	29	29	29	28	16	16
Time	18.50	16.10	12.00	10.30	12.15	14.30
Collected depth	50	50	50	50	50	50
Volume (cc)	5.0	8.9	5.2	46.5	2.4	6.0
Biomass (mg/m ³)	130.2	200.9	210.5	990.9	21.9	58.5
Rate of subsample	1/16	1/16	1/16	1/32	1/4	1/16
No. of total organisms	718	545	989	690	820	531
No. of total the other organisms	9	2	—	—	—	—
ZOOPLANKTON						
O. similis					21	25
O. larvae						
Setella gracilis						
S. larvae						
Oncaea venusta			5			
Corycaeus japonicus						
C. trukicus						3
C. spp	5		9			
Copepoda larvae	48	96	100	60	17	41
C. nauplius larvae					6	1
Euphausia larvae					23	4
E. sp						
Lucifer hansenii						
L. hansenii larvae						
Nyctiphanes australis	35			2		
N. australis larvae						
Parathemisto sp	4	4	10	5	9	2
Oikopleura fusiformis						17
O. sp	13		4		4	28
Sagitta larvae	4	3	8	3	35	4
S. enflata						
S. sp						
Podon Schmackeri					36	
Penilia schmackeri						
Conchoecia sp						
Muggiaea atlantica						
Evadne tergestina	1					
E. nordmanni					32	
Ophiopluteus larvae					20	
Fritillaria pellucida						
Balanus larvae						
Pelagic egg						10
Thalassinid sp	2					
Gastropoda larvae	3	3	2			
Amphipoda sp			2			
Engrulis japonicus egg					1	
Polychaeta larvae					1	
Pleuromamma gracilis						
Gennadus sp						
Lingula larvae						
Fish larvae					8	1
Fish scale				1		

		October				December		
08	10	04	06	08	10	04	07	10
16	16	2	2	2	2	8	7	5
8.00	21.30	06.25	08.30	11.35	16.20	03.55	22.55	21.05
50	50	50	50	50	50	50	50	50
3.8	4.8	1.2	1.0	2.5	10	2.3	3.0	4.0
86	85	16	7.9	23	70	65.7	85.7	94.5
1/16	1/16	1/2	—	1/8	1/4	1/32	1/32	1/8
495	614	466	816	399	586	338	319	250
—	1	—	1	—	—	—	5	44

10	1	46			14			9
				8	9	1		
				2	9			
	4			1	1		3	8
		3	4		12	1	9	7
					4			
5	12							
125	33	37	62	27	100	40	7	9
	20	1						
3	21							1
				3	1	1		
			1		9			
				6	4			
1		3	1	3	4	1		
27	3							
3	13	25	253	17	28	3	27	8
3	8	165	204	6	69			
					3		3	6
	1							
	4				3		2	4
	3							
	1							
	4							
	3							
3	232		2		247		4	13
	2							
	1			2			3	
				1				
				1		2		1

D. 103선 부유생물 조사성적

Plankton Data, Line 103, 1964

Month	March				July	
Station	04	06	08	10	04	06
Date	29	30	30	30	17	17
Time	22.55	01.55	05.15	09.10	11.20	08.15
Collected depth	50	50	50	50	50	50
Volume (cc)	7.8	3.0	11.2	24.5	1.4	4.5
Biomass (mg/m ³)	220.3	96.4	270.1	470.4	31.3	67.5
Rate of subsample	1/32	1/8	1/16	1/32	1/4	1/16
No. of total organisms	960	623	991	997	629	638
No. of total the other organisms	—	—	1	—	—	1
ZOOPLANKTON						
Calanus helgolandicus	14		4			7
C. finmarchicus						
C. tenuicornis	4	5	8		13	10
Undinula darwinii						
C. plumchrus larvae	36	3	59	76		
C. larvae						
C. tenuicornis juv						
Eucalpus attenuatus						
E. sp						
E. mucranatus						
Rhincalanus nosutus						
Paracalanus parvus	522	142	223	25	115	113
P. aculeatus						
Acrocalanus gracilis						364
A. gibber						
A. longicornis						
A. aculeatus						
Calocalanus pavo						
Clausocalanus pergens	2	1				
C. aculeicornis			2			1
Ctenocalanus longicornis	5	14	15	1	4	2
Pseudocalanus minutus	160	306	437	833	301	9
Euchaeta marina						
E. japonica						
E. larvae						
Scolecithricella minor	3		6		1	
S. orientalis			1			
S. bradyi					1	
Centropages abdominalis	2					
C. gracilis						
C. furcatus						
C. juv						
C. sp						
Temora stylifera						
T. turbinata						
Metridia lucens	12	21	35		1	1
M. larvae						
Lucicutia flavicornis						
Candacia bipinnata						
C. larvae						
Acartia clausi	4				2	
A. spinicauda					3	
A. longicornis						2
A. erythrae						
A. sp						
Tortanus discaudatus						
Oithona plumifera	38	40	22	2	25	2

July		October		December			
08	10	04	06	04	06	08	10
17	17	1	1	5	5	5	5
05.05	01.00	20.50	23.05	06.50	09.20	12.05	17.35
50	50	50	50	50	50	50	50
8.0	19.0	—	—	6.0	0.3	0.2	3.0
92.1	140	1.4	16	109.8	13	14	70.7
1/16	1/8	1.0	1.0	1/64	1/4	1/4	1/16
657	598	90	313	423	538	343	295
48	35	3	—	—	10	—	—

5	2		5	1		1	6
16	2		1	86	1		2
			7				5
			1				
	2			6	8	8	4
					2		
							4
					1		
1							
90	10			135	257	56	39
				1	1	14	
252	140			51	62	6	5
		4	19		2	1	
				6	6	13	19
							8
					1	14	1
1	1			28	14	11	57
11	18						5
5	3	33	16	11			
3					1		
2					1		
1	2		6				
2							
	2						
						1	
						4	1
	2			2	1		
	8	4	28		1		
	2						
6	13				1		1
							4
2							
							1
							3
						1	
19	17	1	18	20	46		

Month	March				July	
Station	04	06	08	10	04	06
Date	29	30	30	30	17	17
Time	22.55	01.55	05.15	09.10	11.20	08.15
Collected depth	50	50	50	50	50	50
Volume (cc)	7.8	3.0	11.2	24.5	1.4	4.5
Biomass (mg/m ³)	220.3	96.4	270.1	470.4	31.3	67.5
Rate of subsample	1/32	1/8	1/16	1/32	1/4	1/16
No. of total organisms	960	623	991	997	629	638
No. of total the other organisms	—	—	1	—	—	1
ZOOPLANKTON						
<i>O. similis</i>						6
<i>O. larvae</i>						
<i>Setella gracilis</i>						
<i>S. sp</i>						
<i>Oncaea venusta</i>	1	5	3			1
<i>Corycaeus japonicus</i>						
<i>C. flaccus</i>						
<i>C. spp</i>	22			1		2
Copepoda larvae	65	66	144	45	32	75
<i>C. nauplius larvae</i>	1				9	
<i>Euphausia pellucida</i>	1					
<i>E. kirotopia larvae</i>	4			8		
<i>E. nauplius larvae</i>	3					
<i>E. hrukiria larvae</i>				1		
<i>E. larvae</i>					49	2
<i>E. sp</i>						
<i>Lucifer raynaudii</i>						
<i>Nyctiphanes australis</i>	27	3	8			
<i>N. australis larvae</i>						
<i>Parathemisto sp</i>	12	5	9	3	28	10
<i>Sagitta larvae</i>	5		9	1	17	3
<i>S. sp</i>						
<i>Oikopleura fusiformis</i>						15
<i>O. longicauda</i>						
<i>O. sp</i>	11	9		1	4	11
<i>Podon Schmackeri</i>					6	
<i>Penilia schmackeri</i>						7
<i>Oonchoecia sp</i>						
<i>Muggiaea atlantica</i>						
<i>M. sp</i>						
<i>Evadne tergestina</i>						
<i>E. nordmanni</i>					5	
<i>Doliolum denticulatum</i>						
<i>Ophiopluteus larvae</i>					1	
<i>Fritillaria pellucida</i>						
<i>Polichaeta larvae</i>						
<i>P. sp</i>						
Gastropoda larvae	6	3	5			
<i>Engraulis japonicus egg</i>					5	
<i>Balanus larvae</i>					1	
<i>Bivalves larvae</i>						
<i>Ponthellopsis armata</i>						
<i>Mecynocera clausi</i>						
<i>Clytemnestra scutellata</i>						
<i>Macrurus sp</i>						
<i>Fish larvae</i>					6	

July		October		December			
08	10	04	06	04	06	08	10
17	17	1	1	5	5	5	5
05.05	01.00	20.05	23.05	06.50	09.20	12.05	17.35
50	50	50	50	50	50	50	50
8.0	19.0	—	—	6.0	0.3	0.2	3.0
92.1	140	1.4	16	109.8	13	14	70.7
1/16	1/8	1.0	1.0	1/64	1/4	1/4	1/16
657	598	90	313	423	538	343	295
48	35	3	—	—	10	—	—

2				13	27	49	36
					1	17	
						1	
5	13			5	6	9	7
		4	1	4	17	27	6
							1
11	10			15	62	52	5
86	6	23	68				
16							
9							
	5				2		4
	1						
		32					
		53		1	8	1	1
1	5				3		6
		6					
6	29			5	6	20	15
	24						
	13						
25	11	48			22	24	27
	39						
16	138						
4	1			1	6		
	1						
					1		2
	5						
	5						
3	2						
	1						
							1
3	1						
1	19						
3	1						
	1						
		1					
				6	6	13	19
1							
	1						
2	7	1					

E. 102선 부유생물 조사성적

Plankton Data, Line 102. 1964

Month	March		April		July			
Station	08	10	04	06	04	06	08	10
Date	30	30	2	2	22	22	22	22
Time	16.15	12.05	10.55	12.15	1110	12.20	1545	1935
Collected depth	50	50	50	50	50	50	50	50
Volume (cc)	8.0	12.5	57.0	4.3	2.1	4.3	1.5	25.0
Biomass (mg/m ³)	230.7	380.5	1130.8	81.2	35	118.5	39.2	97.6
Rate of subsample	1/32	1/16	1/16	1/8	1/8	1/32	1/8	1/16
No. of total organisms	824	1,021	316	728	397	431	409	890
No. of total the other organisms	—	—	—	2	—	—	2	—
ZOOPLANKTON								
Calanus helgolandicus	8		15	35	4	1	7	4
C. finmarchicus								
Nannocalanus minor								
Undinula vulgaris								
C. tenuicornis			1	11	48	1	45	
C. plumchrus								
C. pauper								11
Undinula darwinii								
C. helgolandicus juv								
C. plumchrus juv	8	12	151	9				
C. larvae								
C. sp								
Eucalanus mncronatus								
E. subcrassus								1
E. larvae								
E. sp								
Rhincalanus larvae								
Paracalanus parvus	11	13	22	249	92	53	226	14
P. aculeatus								
P. parvus juv								
P. larvae								
Acrocalanus gracilis		1			16	132	73	15
A. longicornis								
A. gibber								
A. larvae								
Calocalanus pavo								
Clausocalanus pergens	2	3	2			1		
Ctenocalanus longicornis	3	6	1	6		4	1	9
Pseudocalanus minutus	682	908		91	148	71	20	2
P. gracilis								
P. larvae								
Euchaeta japonica								
E. marina								
E. pacifica								
E. concinna								
E. flava								
E. marina juv								1
E. sp						2		
Scolecithricella minor		1					1	1
S. bradyi							1	
S. orientalis								
Centropages furcatus								
C. elongatus								
C. abdominalis	4	1		11				
C. longicornis						1		4
C. larvae								
Temora turbinata								

October								Decembr			
04	06	08	10	01	03	05	07	01	03	05	10
1	1	1	1	20	20	20	20	16	16	16	16
1240	10.10	07.00	03.20	09.50	11.20	14.55	19.20	08.05	10.15	13.35	17.16
50	50	50	50	50	50	50	50	50	50	50	50
6.5	1.7	1.5	1.8	8.0	5.0	6.5	9.5	0.7	1.7	2.0	1.3
55.4	403	28.2	31.6	86.8	47.0	1.0	115.6	16.8	29.2	34.0	23
1/16	1/2	1/4	1/2	1/16	1/8	1/8	1/8	1/4	1/4	1/4	1/4
315	475	356	487	215	367	356	311	492	280	306	261
22	—	—	1	—	—	12	31	—	8	—	—

	19	2	9	18	7	10	7	2		4	9
	2		4		1	2	1				
	4	10	6	1			5				4
	1					5	1				
7	1				1		4				5
									5	3	
									1		3
							2				
	13			1			3			1	
											3
	1	1			33	2	1	169	49	40	49
5					20	4	7	1	6	10	16
				4							
				4	20	5	3	22	14	1	12
	7										
	4	26	27	14		12	8		1		
143		4									
					2	1	2		2		
				29		19			1	55	31
								2	2	1	
		107	83			5			1		2
	62										
20	15										
						2				1	1
							1				1
				2							
		2		1	1	7	7	4	1	1	1
	2	6	70		2						
				1							
	1			4	3	1	2				
						5	2				
				3	1						
				15	5	1	1			2	

Month	March		April		July			
Station	08	10	04	06	04	06	08	10
Date	30	30	2	2	22	22	22	22
Time	16.15	12.05	1055	1215	1110	12.20	1545	1935
Collected depth	50	50	50	50	50	50	50	50
Volume (cc)	8.0	12.5	57.0	4.3	2.1	4.3	1.5	25.0
Biomass (mg/m ³)	230.7	380.5	1130.8	81.2	35	118.5	39.2	97.6
Rate of subsample	1/32	1/16	1/16	1/8	1/8	1/32	1/8	1/16
No. of total organisms	824	1,021	316	728	397	431	409	890
No. of total the other organisms	—	—	—	2	—	—	2	—
ZOOPLANKTON								
T. discaudata								5
T. stylifera								
Metridia lucens	17							
M. larvae					4			
Lucicutia flavicornis								
Candacia longimana								
C. bradyi								
C. bipinnata								4
C. discaudata								
C. discaudata juv								2
C. larvae								
Labidocera bipinnata					1			
L. japonica								1
L. euchaeta								
Acartia clausi	1	1		1				3
A. longicornis								
A. erythraea								
A. spinicauda								
A. sp								
A. larvae								
Tortanus discaudata					1			
Oithona plumifera	18	20	2	31	10	4	1	21
O. robusta								
O. similis			4		7			23
O. larvae								
Setella gracilis								10
S. larvae								
S. sp								
Microsetella rosea								
Euterpe acutifrons								
Oncaea venusta	1					1		23
Corycaeus japonicus						5		3
C. spp	4	1		40				
C. longistylis								
Copilia quadrata								
Copepoda sp						130	25	12
C. larvae	23	42	30	133	23			
C. nauplius larvae					16			
Euphausia kirotobia stage	2	5						
E. kirotobia			30					
E. kirotobia larvae	4		36					
E. sp								
E. larvae				84				
Lucifer hansenii								
L. h. larvae								
L. raynaudii								1
Nyctiphanes australis					10	7	2	13

October								December			
04	06	08	10	01	03	05	07	01	03	05	10
1	1	1	1	20	20	20	20	16	16	16	16
1240	1010	0700	0320	0950	1120	14.55	1920	08.05	10.15	13.35	17.16
50	50	50	50	50	50	50	50	50	50	50	50
6.5	1.7	1.5	1.8	8.0	5.0	6.5	9.5	0.7	1.7	2.0	1.3
55.4	403	28.2	31.6	86.8	47.0	1.0	115.6	16.8	29.2	34.0	23
1/16	1/2	1/4	1/2	1/16	1/8	1/8	1/8	1/4	1/4	1/4	1/4
315	475	356	487	215	367	356	311	492	280	306	261
22	—	—	1	—	—	12	31	—	8	—	—
					3						
		53	46	2	10	5	1	1			1
						4					
				2			1				
	1					2		2	3		1
							1				
				1		9				2	1
			1	4				5			
									1		
12	31	30	39		70	65	66	40	66	39	44
	2										
49	45	2						17	4		
				1						1	
						1		1			
									1		
1			5			8	13	2	3	10	9
		2	3	15	22	24	28	37	6	3	7
						4	8				
					1						
			1							3	
8	55	94	162	97	32	43	16	80	45	16	17
9											
										1	1
		1					1				
45		1	1		20	1	1				
								5	3		

Month	March		April		July			
Station	08	10	04	06	04	06	08	10
Date	30	30	2	2	22	22	22	22
Time	16.15	12.05	1055	1215	1110	12.20	1545	1935
Collected depth	50	50	50	50	50	50	50	50
Volume (cc)	8.0	12.5	57.0	4.3	2.1	4.3	1.5	25.0
Biomass (mg/m ³)	230.7	380.5	1130.8	81.2	35	118.5	39.2	97.6
Rate of subsample	1/32	1/16	1/16	1/8	1/8	1/32	1/8	1/16
No. of total organisms	824	1.021	316	728	397	431	409	890
No. of total the other organisms	—	—	—	2	—	—	2	—
ZOOPLANKTON								
Nyctiphanes australis larvae								
Trypaea australiensis								
T. a. larvae								
Parathemisto sp	3	2	7	6	2			1
Sagitta spp								
S. larvae	4	2	1	6	7	3		10
Oikopleura megastoma								
O. sp	2			4				
O. fusiformis								
O. larvae						2	1	14
Macrothrix rosea								
Podon Schmackeri					1		3	3
Penilia schmackeri					1		1	542
Conchoecia elegans								
C. sp		1		2				3
Muggiaea atlantica				1				
M. sp								
Evadne nordmanni				3	1			
E. tergestina	4							
Doliolum nationalis	16							2
Salpa sp								
Echinopluteus sp								
E. larvae								
Doliioletta denticulatum								12
Ophiopluteus aculeata								
O. larvae								1
Fritillaria haplastoma								11
Obelia geniculata								
Balanus larvae					1			
Noctiluca scintillans	5			3				
Bivalves larvae		1						
Polychaeta larvae								4
Gastropoda larvae		1	4					
Fish larvae					3			7
Fish egg	1							
Fish scale								
Engraulis japonicus egg					1			2
Pelagic egg	1		10			13		2

October								December			
04	06	08	10	01	03	05	07	01	03	05	10
1	1	1	1	20	20	20	02	16	16	16	16
240	1010	0700	0320	0950	1120	455	1920	08.05	10.15	13.35	17.6
50	50	50	50	50	50	50	50	50	50	50	50
6.5	1.7	1.5	1.8	8.0	5.0	5.5	9.5	0.7	1.7	2.0	1.3
15.4	40.3	28.2	31.6	86.8	47.0	1.0	11.56	16.8	29.2	34.0	2.23
1/16	1/2	1/4	1/2	1/16	1/8	1/8	1/8	1/4	1/4	1/4	1/4
315	475	356	487	215	367	356	311	492	280	306	261
22	—	—	1	—	—	12	31	—	8	—	—

F. 209선 부유생물 조사성적

Plankton Data, Line 209, 1964

Month	April	July			October				December	
Station	07	04	06	08	01	03	05	07	05	07
Date	3	23	23	23	26	26	26	26	17	17
Time	19.00	08.00	05.00	01.45	11.15	03.45	17.30	21.40	05.55	02.55
Collected depth	50	50	50	50	50	50	50	50	50	50
Volume (cc)	12.0	7.0	4.5	10.0	3.0	9.5	26.0	2.0	0.5	2.5
Biomass (mg/m ³)	130.0	122	87.5	77.4	39.2	80.7	118.7	212.3	9.2	72.1
Rate of subsample	1/16	1/32	1/16	1/16	1/2	1/8	1/8	1/4	1/2	1/8
No. of total organisms	836	456	348	701	454	474	543	521	289	246
No. of total the other organisms	—	6	—	—	—	—	—	—	—	—
ZOOPLANKTON										
Calanus helgolandicus	6	6	39	2	30	6	11	4	8	2
C. finmarchicus					2					
C. tenuicornis		71	39	1				1	2	
C. vulgaris					1		5			
C. plumchrus		1								
Undinula darwinii					1		9	13		
C. pauper							3			
C. minor					3			1		
C. larvae						6	3	3		
C. sp	6								5	
C. sp juv										1
Eucalanus attenuatus				5					3	1
E. larvae						5	6	3		
Paracalanus parvus	119	8	74	48	19	36	5	8	139	106
P. aculeatus					12	24	30		4	9
Acrocalanus gracilis	7	68		48	29	3	5	3		
A. gibber					60	19	2			
A. longicornis						1				4
Calocalanus pavo						1	4	1		
Clausocalanus arcuicornis					13					
C. pergens						20	51	41	19	27
Ctenocalanus longicornis				7					2	5
Pseudocalanus minutus		156	17							
Euchaeta marina								7		
E. japonica							4	3		
E. concinna							2	11		
E. flava								1		
E. marina juv	7			1						
E. larvae					5	28	13	14		
E. sp										2
E. sp juv										3
Scolecithricella minor			1							
Centropages abdominalis	7		1							
C. longicornis		1							1	
C. gracilis										
C. bradyi										1
C. furcatus larvae					7	1		5		
C. sp juv									1	
Temora stylifera			1	5	18	2		3		
T. discaudata				5						
T. turbinata					9					2
Candacia armata	4									
C. bipinnata			5							1
C. pacifica							1			
C. catula									1	
C. longimana										1
C. larvae							1			
C. sp juv									1	
Labidocera bipinnata			1							
L. japonica			1							
Acartia clausi					3	2				
A. longicornis					1			2		
A. erythraea									1	
Tortanus discaudatus					2					
Oithona plumifera	16	12	4	19	8	21	15	6	16	16

Month	April	July				October				December	
Station	07	04	06	08	01	03	05	07	05	07	
Date	3	23	23	23	26	26	26	26	17	17	
Time	19.00	08.00	05.00	01.45	11.15	03.45	17.30	21.40	05.55	02.55	
Collected depth	50	50	50	50	50	50	50	50	50	50	
Volume (cc)	12.0	7.0	4.5	10.0	3.0	9.5	26.0	2.0	0.5	2.5	
Biomass (mg/m ³)	13.00	122	87.5	77.4	39.2	80.7	118.7	212.3	9.2	72.1	
Rate of subsample	1/16	1/32	1/16	1/16	1/2	1/8	1/8	1/4	1/2	1/8	
No. of total organisms	836	456	348	701	454	474	548	521	289	246	
No. of total the other organisms		6	—	—	—	—	—	—	—	—	

ZOOPLANKTON

[illegible]

G. 208선 부유생물 조사성적

Plankton Data, Line 208, 1964

Month	April			July			August		
Station	01	03	05	01	03	05	01	03	05
Date	3	3	3	24	24	24	16	14	14
Time	06.25	08.30	11.05	05.58	28.05	10.50	11.30	18.45	15.30
Collected depth	50	50	50	50	50	50	50	50	50
Volume (cc)	5.3	12.0	14.5	4.8	6.0	8.0	6.0	2.0	8.0
Biomass (mg/m ³)	150.9	109.2	190.2	84.4	52.7	65.4	85.6	44.7	90.5
Rate of subsample	1/16	1/16	1/8	1/16	1/16	1/16	1/8	1/4	1/8
No. of total organisms	644	439	923	512	679	590	608	440	453
No. of total the other organisms	—	—	—	—	—	1	—	1	3

ZOOPLANKTONP

Calanus helgolandicus	12	4	34	3	10				2
C. tenuicornis				115					
Nannocalanus minor									3
Undinula darwinii									7
C. pauper									
Undinula vulgaris									2
C. larvae									
C. sp		26	39	6					
Eucalanus attenuatus							1		6
E. subcrassus									1
E. larvae						4			
E. sp		1							
Paracalanus parvus	205	99	156	109	79	67	4		10
P. aculeatus								2	1
Acrocalanus gracilis	58	28	20	75	21	11	211	23	1
A. longicornis						2		4	
A. gibber									
Calocalanus plumulosus								1	
C. pavo								11	14
Clausocalanus pergens						1		14	11
Ctenocalanus longicornis	8	1	1		3	3	6		
Pseudocalanus minutus				35	1	6			3
P. gracilis									
Euchaeta marina			2						
E. japonica									
E. flava									
E. plana									
E. marina larvae						2			
E. larvae									
Scolecithricella minor				1					
S. larvae									
Scolecithrix danae									
Centropages abdominalis	5	4	17		1		1		
C. longicornis						1			
C. bradyi					1				
C. furcatus									2
C. larvae				1		4		5	
Temora stylifera					3	1	1	2	29
T. discaudata								1	38
T. turbinata									
Metridia lucens	2								
M. larvae									
Candacia armata		2							
C. bipinnata						1			6
C. curta									
C. larvae	1				1	8	1		
Labidocera kroyeri					1				

September			October				December		
01	03	05	01	03	05	07	01	03	05
30	30	30	28	28	28	28	19	19	19
14.15	16.15	18.55	10.42	13.05	15.55	18.05	06.40	09.10	11.40
50	50	50	50	50	50	50	50	50	50
3.5	10.0	1.8	6.0	11.0	26.0	12.0	1.5	1.2	1.8
60.2	78.9	12.7	54	88.3	221	184	40.2	12	20.3
1/4	1/32	1/4	1/8	1/8	1/8	1/2	1/4	1/2	1/2
526	204	360	565	387	398	418	478	624	883
3	—	—	—	6	—	1	—	—	—
	6	3	2	11	7	3	13		2
12		4							
3	3		2	3	13	6			1
	8								
			11	9			11		5
			42						
						1			
11		3	1		1	5			4
42	8	25	90	64	20	93	243	125	220
4	29		2	4	20	10		11	45
75	5	25	39	3	11	16	24	5	20
8									
8	17	2	8	3	4	3			
1									
	1		2	3	3	4	1	10	
	2		1	7		26	1		9
	6	9					3		1
2	1	73		8	35	8	3	2	
4		1							
	3					4			
					2	5			
2			2	13	7	14	2	3	6
				1					
					3	2			
1		1	4		1	3	1		
	1						1		
12	7		22		1	11	2	6	20
			7	1		4		1	
						4			
		1							
		1							
					1				
			2			3	1	1	1

September			October				December		
01	03	05	01	03	05	07	01	03	05
30	30	30	28	28	28	28	19	19	19
14.15	16.15	18.55	10.42	13.05	15.55	18.05	06.40	07.10	11.40
50	50	50	50	50	50	50	50	50	50
3.5	10.0	1.8	6.0	11.0	26.0	12.0	1.5	1.2	1.8
60.2	78.9	12.7	54	88.3	221	184	40.2	12	20.3
1/4	1/32	1/4	1/8	1/8	1/8	1/2	1/4	1/2	1/2
526	204	360	565	387	398	418	478	624	883
3	—	—	—	6	—	1	—	—	—

		3							
5			3			1			
			2			1		2	
			3	1		1			
3	1		2			1			2
		1		1				1	
		11							
1									
10	3	29		7	2	11	11	74	125
			25	11	4	9	54	14	25
3	1			2					1
						1			
			1				1	3	3
17	9	1	4	24	55	9		14	30
					1				1
32	2		20	19	27	13	13	91	50
3			2						
			3		3	2		2	1
				1				2	
			1						
1									
					4	1			
29	14	14	90	41	38	47	38	73	125
13					3			1	
			5						
			1	5					
33	12		18	2	18	28		6	2
							22	16	
1			4						1
	3	1							
				1	10	9			1
90	14	140	40	8	8	18	22	30	50
8									
12									
8	16	10	24	84	55	4	10	73	
35	12		10						
			3	1	4	16			

Month	April			July			August		
Station	01	03	05	01	03	05	01	03	05
Date	3	3	3	24	24	24	16	14	14
Time	06.25	08.30	11.05	05.58	08.05	10.50	11.30	10.45	15.30
Collected depth	50	50	50	50	50	50	50	50	50
Volume (cc)	5.3	12.0	14.5	4.8	6.0	8.0	6.0	2.0	8.0
Biomass (mg/m ³)	150.9	109.2	190.2	84.4	52.7	65.4	85.6	44.7	90.5
Rate of subsample	1/16	1/16	1/8	1/16	1/16	1/16	1/8	1/4	1/8
No. of total organisms	644	439	923	512	679	590	608	440	453
No. of total the other organisms	—	—	—	—	—	1	—	1	3
ZOOPLANKTON									
Conchoecia sp	4	1	6	5	5	2	25	1	
Muggiaea atlantica			36	2			2		
M. sp		3							
Diphyes sp							3	1	
Evadne tergestina	3	4	25	1	8	17	1	1	7
E. nordmanni		7	46				1		
Doliolum sp									
Ophiopluteus aculeata									
O. sp									
O. larvae									1
Fritillaria pellucida		25				51			
F. haplostoma						28			
Obelia geniculata				1					
Balanus larvae				4	1		18		1
Polychaeta larvae	1			3	3	2	10	1	4
Liriope sp						2			
Dolioletta denticulatum				1		18		1	2
Siphonantes borealis						1			
Brachyura larvae				2	1				
Fish larvae	1					4			
Engraulis japonicus egg						1		192	
Lingula larvae									6
Pelagic egg	15	8	6		24	1	50		
Geryonia probascidalis								1	
Macrurus sp	1							1	
Noctiluca scintillans	18	54	100						
Pyrocystis noctiluca		2							

September			October				December		
01	03	05	01	03	05	07	01	03	05
30	30	30	28	28	28	28	19	19	19
14.15	16.15	18.55	10.42	13.05	15.55	18.05	06.40	09.10	11.40
50	50	50	50	50	50	50	50	50	50
3.5	10.0	1.8	6.0	11.0	26.0	12.0	1.5	1.2	1.8
60.2	78.9	12.7	54	88.3	221	184	4.2	12	20.3
1/4	1/32	1/4	1/8	1/8	1/8	1/2	1/4	1/2	1/2
526	204	360	565	387	398	418	478	624	883
3	—	—	—	6	—	1	—	—	—
3	2 5		3	1			2	1	17
							2	7	8
	4			7	4	2			40
17			2	1					
				1					
8			10	2			8	8	18
3		1	7	4	4			4	6
	1			6		1			
13			3		1				
	11		50	19	25	14	12	38	30

H. 207선 부유생물 조사성적

Plankton Data, Line 207, 1964

Month	April			May			July	
Station	01	03	05	01	03	05	01	05
Date	11	11	11	28	28	28	24	24
Time	09.45	1.201	13.10	11.15	09.45	08.10	20.15	16.45
Collected depth	—	50	—	50	50	50	50	50
Volume (cc)	27.0	60.5	103.2	5.0	5.0	5.0	1.7	8.0
Biomass (mg/m ³)	420.2	164	164	21.7	4.8	54.8	16	67.9
Rate of subsample	1/64	1/16	1/20	1/4	—	1/4	1/4	1/6
No. of total organisms	1,316	746	894	575	196	484	418	715
No. of total the other organisms	—	—	—	—	—	—	—	—
ZOOPLANKTON								
Calanus helgolandicus	2					4		
C. tenicornis						1		
Undinula vulgaris								
U. darwinii								
Nannocalanus minor								
Calanus pauper						1		
C. larvae								
C. sp	3		5					
Eucalanus larvae							1	3
E. sp								
Rhincalanus cornutus						1		
Paracalanus aculeatus						12		
P. parvus	44	11	32	86	38	104	60	14
Acrocalanus gibber								
A. gracilis	22	25					14	14
A. longicornis								
Calocalanus pavo								
C. plumulosus								
Clausocalanus perge						1		1
C. arcuicornis						1		1
Ctenocalanus longicornis				2	1	6	8	1
Pseudocalanus minutus						2		
Euchaeta marina						2		
E. japonica								
E. flava								
E. larvae								
E. marina larvae				7				
Scolecithrix danae								
Centropages abdominalis	17	1		1		2	1	
C. bradyi								
C. longicornis							1	
C. furcatus								
C. larvae								
Temora stylifera						3	1	2
T. discaudata						4		3
T. turbinata								
Lucicutia flavicornis							1	
Candacia discaudata						16		
C. longimana								
C. pachydactyla								
C. larvae			1				1	3
Labidocera japonica								
L. larvae								
Acartia clausi	1					3	2	
A. erythraea								
A. spinicauda								
A. longicornis								

Month	April			May			July	
Station	01	03	05	01	03	05	01	05
Date	11	11	11	28	28	28	24	24
Time	09.45	11.20	13.10	11.15	09.45	08.10	20.15	16.45
Collected depth	0	50	0	50	50	50	50	50
Volume (cc)	27.0	60.5	103.2	5.0	5.0	5.0	1.7	8.0
Biomass (mg/m ³)	420.2	—	—	21.7	4.8	54.8	16	67.9
Rate of subsampe	1/64	1/16	1/20	1/4	—	1/4	1/4	1/6
No. of total organisms	1.316	746	894	575	196	484	418	715
No. of total the other organisms	—	—	—	—	—	—	—	—
ZOOPLANKTON								
Acartia larvae								
A. sp								
Tortanus forcipatus								
Oithona similis				4	5	2	4	
O. plumifera		5	4	7		33	10	6
O. larvae								
Setella gracilis								
S. sp								
Eutерpe acutifrons								
Oncaea venusta			1		3	66	1	8
Sapphirina angusta								1
Corycaeus speciosus								
C. japonicus							4	1
C. gibburris								
C. consinnus								
C. obsta								
C. catus								
C. spp	8	2	11	89	35	42		
Copepoda larvae	13	20	48	230	16	24	22	
C. sp								
Euphausia larvae				12	1	5		
E. sp	6	13	22					
Leptochella sydniensis								
Lucifer hansenii								
L. hansenii larvae								
L. sp			1					
Nyctiphanes australis							5	7
N. australis larvae								
Parathemisto sp								
Sagitta bipunctata								
S. larvae	1		1	5	8	7	5	4
S. sp								
Oikopleura longicauda								
O. dioica								
O. fusiformis								
O. sp	4	5	2	8	5	9	11	15
Podon Schmackeri				5	1	12	31	21
P. sp								
Penilia schmackeri				1	1	14	114	396
Conchoecia sp				1	1	3	4	
Muggiaea atlantica				2				
M. sp								
Evadne nordmanni	2	2	2	6	2	6		
E. tergestina	2						2	9
Doliolum sp								
Dolioletta denticulatum							7	104
Ophiopluteus larvae								

August			September			November			December		
01	03	05	01	03	05	01	03	05	01	03	05
14	14	14	2	2	2	1	1	1	19	19	19
05.10	06.45	08.50	10.05	11.45	13.20	08.55	06.10	04.55	22.00	20.05	18.10
50	50	50	50	50	50	50	50	50	50	50	50
8.0	5.0	2.0	2.7	5.5	3.5	14.0	9.0	7.5	4.0	0.4	1.5
310.6	67	21.3	32.0	69.0	44.2	109.5	102.3	107.3	116	7.2	23.9
1/16	1/8	—	1/8	1/16	1/8	1/8	1/4	1/4	1/16	1/4	1/8
767	622	296	561	473	269	439	437	363	248	213	255
4	—	—	—	—	—	—	—	12	—	—	—

							2	1	1		1
5											
26	5										
5	58	13		10		6	13	22	5	32	35
						6	14	10			
		5		8				1	1		
1						1	1				
	13	39		48				1			
						7	35	25	1		5
		2		3							
34	28	3		4		36	19	14	17	3	5
				1							
				2							
				3							
							1	2			
32	30	21		4		44	62	65	12	7	
											8
				1							
7		1					2	11	2		
						2	13				
				1		2	1	2			
				1		17	4	5			1
	27						2				
1	21	6				5			4	1	
7						3	2	4			
4		2									
13	11	6		30		15					
							19	7		1	1
				12							
		6		6							
11	27	4		6		36	32	21	4	10	80
									1		
11	246	3		5		20	1				
	6	4				1	2	9	4	4	6
	3	3									
							7				3
1	1			6							
							2	1			
	3	2									
3				3							

Month	April			May			July	
Station	01	03	05	01	03	05	01	05
Date	11	11	11	28	28	28	24	24
Time	09.45	11.20	13.10	11.15	09.45	08.10	20.15	16.45
Collected depth	0	50	0	50	50	50	50	50
Volume (cc)	27.0	60.5	103.2	5.0	5.0	5.0	1.7	8.0
Biomass (mg/m ³)	420.2	—	—	21.7	4.8	45.8	16	67.9
Rate of subsample	1/64	1/16	1/20	1/4	—	1/4	1/4	1/6
No. of total organisms	1.316	746	894	575	196	484	418	715
No. of total the other organisms	—	—	—	—	—	—	—	—
ZOOPLANKTON								
Fritillaria pellucida					1	87	85	65
F. halplostoma								8
Obelia geniculata								2
O. sp							1	
Balanus larvae								
	1			16		3	11	24
Bivalves larvae								
Polychaeta larvae						1	2	
P. sp								
Gastropoda larvae						3		
Fish larvae				3			3	
F. scale				1				
Engraulis japonicus egg		1		37	56	3	3	
Amphipoda sp						1		
Macrurus sp					2			
Pelagic egg		9	1	43				1
Clytemnestra scutellata				1				
Brachyura larvae							1	
Pleurobrachia pileus								1
Liop sp								
Lingula larvae								
Siphonantes larvae								
Noctiluca scintillans	1190	655	757					
Pyrocystis noctiluca		4	3	8	19			
Ceratium gracilis			3					

August			September			November			December		
01	03	05	01	03	05	01	03	05	01	03	05
14	14	14	2	2	2	1	1	1	19	19	91
05.10	06.45	08.50	10.05	11.45	13.20	08.55	06.10	04.55	22.00	20.05	18.10
50	50	50	50	50	50	50	50	50	50	50	50
8.0	5.0	2.0	2.7	5.5	3.5	14.0	9.0	7.5	4.0	0.4	1.5
310.6	67	21.3	32.0	69.0	44.2	109.5	102.3	107.3	116	7.2	23.9
1/16	1/8	—	1/8	1/16	1/8	1/8	1/4	1/4	1/16	1/4	1/8
767	622	296	561	473	269	439	437	363	248	213	255
4	—	—	—	—	—	—	—	12	—	—	—

1		12			1						
		1									
42	4					15	2	5	3		
2		1									
5	2				3	5		1			
1					2						
						1					
	1	95			2				1		
	4	8									
1						28	26	10		4	1
2					1			4			
1	2				1						
	1										
					1						

I. 206선 부유생물 조사성적

Plankton Data, Line 206, 1964

Month	April		May		June		September
Station	02	04	01	03	S ₁	04	02
Date	15	14	28	28	25	25	3
Time	02.00	23.00	00.21	02.40	09.10	16.25	13.25
Collected depth	50	50	50	50	50	50	50
Volume (cc)	15.5	2.9	3.5	3.0	3.0	4.0	7.0
Biomass (mg/m ³)	170.5	37.8	86	58.9	33.9	37.7	49.8
Rate of subsample	1/16	1/2	1/8	1/2	1/2	1/4	1/8
No. of total organisms	1,167	184	1545	687	1,317	995	515
No. of total the other organisms	—	4	—	20	—	—	6
ZOOPLANKTON							
<i>Calanus helgolandicus</i>	7	16	6	42			
<i>C. tenuicornis</i>							10
<i>C. pauper</i>							
<i>C. finmarchicus</i>							
<i>Calanus</i> sp	5			6	8		
<i>Eucalanus</i> larvae							1
<i>E. sp</i>						1	
<i>Rhincalanus cornulus</i>		1					
<i>Paracalanus parvus</i>	22	38	65	322	165	183	12
<i>Acrocalanus gracilis</i>	2	4	3	5			4
<i>A. longicornis</i>							1
<i>A. gibber</i>							6
<i>Calocalanus favo</i>							7
<i>C. plumulosus</i>							2
<i>Cla. socialanus orcuicorni</i>				1	1		11
<i>Ctenocalanus longicornis</i>		1		1	7	1	
<i>Pseudocalanus minutus</i>		1		1			24
<i>Euchaeta marina</i>		5	3	120			
<i>E. m. juv</i>			5	48	14		
<i>Centropages abdominalis</i>	3				2		
<i>C. furcatus</i>							4
<i>C. longicornis</i>							3
<i>Lucicutia flavicornis</i>		1					
<i>Temora stylifera</i>						1	9
<i>T. discaudata</i>							2
<i>Candacia bippinata</i>							1
<i>Candacia discaudata</i>			1		3		
<i>Candia juv</i>						3	
<i>Labidocera bipinnata</i>					1		
<i>L. japonica</i>					1		
<i>Acartia clausi</i>			1		1	1	3
<i>A. spinicauda</i>							7
<i>Oithona plumi</i>	3	1	17		22	27	27
<i>O. similis</i>			4				
<i>O. nana</i>							1
<i>Setella gracilis</i>							3
<i>Oncaea venusta</i>		2	1		16	3	30
<i>Corycaeus speciosus</i>		1					2
<i>C. concinnus</i>							11
<i>C. lautus</i>							2
<i>C. japonicus</i>							16
<i>C. gibbulus</i>							3
<i>C. sp</i>			122				
<i>C. spp</i>	4	3		15	123	9	
Copepoda larvae	13	8	259	7	186	21	26
<i>C. nauplius</i> larvae	6	1	21	5	18		
<i>Euphasia</i> stage	7	15					

Month	April		May		June		September
Station	02	04	01	03	S ₁	04	02
Date	15	14	28	28	25	25	3
Time	02.00	23.00	00.21	02.40	09.10	16.25	13.25
Collected depth	50	50	50	50	50	50	50
Volume (cc)	15.5	2.9	3.5	3.0	3.0	4.0	7.0
Biomass (mg/m ³)	170.5	37.8	86	58.9	33.9	37.7	49.8
Rate of subsample	1/16	1/2	1/8	1/2	1/2	1/4	1/8
No. of total organisms	1.167	184	1.545	687	1.317	995	515
No. of total the other organisms	—	4	—	20	—	—	6
ZOOPLANKTON							
<i>E. pellucida</i>	1						
<i>E. larvae</i>			4	3	60	4	
<i>Lusifer hanseni</i>							11
<i>L. h. larvae</i>							67
<i>Nyctiphanes australis</i>							4
<i>Parathemisto</i> sp				20	26		
<i>Sagitta</i> larvae	1	1	6	5	21	3	34
<i>S. sp</i>		1					
<i>Oikopleura fusiformis</i>		4					2
<i>O. sp</i>	10		26	3		16	21
<i>Podon Schmackeri</i>					2	67	
<i>Penilia schmackeri</i>					19	545	115
<i>Conchoecia</i> sp	3		2	30	41		1
<i>Muggiaea atlantica</i>	1	10	3			3	1
<i>M. sp</i>	3						
<i>Evadne nordmanni</i>	22	3				41	
<i>E. tergestina</i>			1		30	8	6
<i>Ophiopluteus</i> larvae					7	5	2
<i>Fritillaria haplostom</i>							6
<i>F. pellucida</i>		6					
<i>Obelia geniculata</i>		1				4	
<i>Balanus</i> larvae		1	24		144		
<i>Polychaeta</i> larvae			1				3
<i>Siphonantes borealis</i>					1		
<i>Engraulis Japonicus</i>			1	1			
<i>E. japonicus</i> egg			31	6	42	14	2
<i>Lingula</i> larvae							4
<i>Pelagic</i> egg		2			115	1	
<i>Clytemnestra scutellata</i>				3			
<i>Bivalves</i> larvae					1		
<i>Heliozoa</i> sp						6	
<i>Fish</i> larvae					24	7	
<i>F. Scale</i>							2
<i>Noctiluca scintillans</i>	1.648	58	935	7	125		
<i>Pyrocystis noctiluca</i>		4		16	91	20	

J. 205선 부유생물 조사성적

Plankton Data, Line 205, 1964

Month	April			May			June			September		
Station	01	05		01	03	05	01	03	05	01	03	05
Date	18	18		27	27	27	29	9	29	5	5	5
Time	08.58	18.35		10.50	13.20	16.45	14.00	16.30	19.45	14.10	16.40	19.40
Collected depth	50	50		50	50	50	50	50	50	50	50	50
Volume (cc)	5.0	5.5		20.0	0.3	2.5	10.0	5.0	4.5	12.0	6.0	6.5
Biomass (mg/m ³)	84.8	56.2		98.4	2.5	35	25.6	26.8	42	150.5	46.7	79.9
Rate of subsample	1/4	1/4		1/2	—	1/2	1/16	1/4	1/4	1/16	1/8	1/8
No. of total organisms	574	571		505	188	573	692	888	675	385	294	398
No. of total the other organisms	—	25		8	1	—	—	31	—	—	—	—

ZOOPLANKTON

Calanus minor								2				11
C. helgolandicus	6	24		154	7	3	103	5	1	2		6
Undinula vulgaris												3
C. pauper						40		6	2		3	5
C. sp	10						10					
Eucalanus subcrassus												2
E. sp						4		3	1			
Paracalanus parvus	95	233		37	61	48	237	239	80	27	2	23
P. aculeatus												21
Acrocalanus gibber								2	1		1	2
A. gracilis	1	51			8					8	5	28
Calocalanus plumulosus						1						2
C. pavo						3				1	5	5
Clausocalanus pergens						3		1	5		2	9
Ctenocalanus longicornis					1	2	32		12			3
Pseudocalanus minutus						6					2	49
Euchaeta marina		6		38	17		5		1			6
E. larvae				10			10				1	7
E. marina juv	2	11					13					
Scolecithricella orientalis							2					
Centropages furcatus									1	1		1
C. abdominalis	4						5			2		
C. longicornis												1
Temora stylifera					3			1	5	8	4	
T. discaudata					2		2			2	1	
T. sp												4
Candacia bipinnata							1			1		
C. pectinata												1
C. larvae					2							
C. sp							1	2				
Labidocera japonica							7				1	5
Acartia spinicauda											5	6
A. clausi				1		1	4			17		
Tortanus forcifatus										4		
Oithona nana										1	1	3
O. plumifera	8	3		1		66			12	1	9	30
O. similis				17	22	5	6					
Setella gracilis												9
Oncaea venusta	5			2	3	37	2	20	38		7	30
Shappirina sp								1				1
Corycaeus speciosus											3	2
C. japonicus										14	2	12
C. obtusa										3	1	2
C. concinnus											2	5
C. sp				14	11							
C. spp	41	17				27	45	16	2			
Copilia milabilis												2
Copepoda larvae	53	75		14	2	10		1		2	8	16
C. sp								22				

Month	April			May			June			September		
Station	01	05		01	09	05	01	03	05	01	03	05
Date	18	18		27	27	27	29	9	29	5	5	5
Time	08.58	18.35		10.50	1320	16.45	14.00	16.30	19.45	14.10	16.40	19.40
Collected depth	50	05		50	50	50	50	50	50	50	50	50
Volume (cc)	5.0	5.5		20.0	0.3	2.5	10.0	5.0	4.5	12.0	6.0	6.5
Bio.mass (mg/m ³)	84.8	56.2		98.4	2.5	35	25.6	26.8	42	150.5	46.7	79.9
Rate of subsample	1/4	1/4		1/2	—	1/2	1/16	1/4	1/4	1/16	1/8	1/8
No. of total organisms	574	571		505	188	573	692	888	675	385	294	398
No. of total the other organisms	—	25		8	1	—	—	31	—	—	—	—

ZOOPLANKTON

[illegible]

K. 204선 부유생물 조사성적

Plankton Data, Line 204, 1964

Month	April			May			June		September	
Station	04	06	S. 07	01	03	05	S. 8	05	03	05
Date	21	21	23	27	27	25	29	30	7	6
Time	09.25	12.35	09.35	09.25	06.25	20.00	21.31	12.00	04.10	08.25
Collected depth	50	50	50	50	50	50	50	50	50	50
Volume (cc)	4.8	254	6.0	1.5	1.0	2.0	6.5	5.5	3.0	5.0
Biomass (mg/m ³)	79.8	31.9	30.9	25.2	25.7	22.9	62	63.7	34.7	54.3
Rate of subsample	1/4	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/16
No. of total organisms	570	533	1,553	563	368	379	930	969	596	321
No. of total the other organisms	—	—	—	4	—	—	—	23	—	—
ZOOPLANKTON										
<i>Calanus helgolandicus</i>	61	6	2	9	39	4	6		6	2
<i>C. pauper</i>					1	1	2		6	
<i>C. sp</i>	28	10	2							
<i>Eucalanus subcrassus</i>								4		
<i>E. larvae</i>									2	
<i>E. sp</i>			2			1				
<i>Rhincalanus cornutus</i>			1							
<i>Paracalanus parvus</i>	215	273	974	44	55	35	144	35	133	64
<i>Acrocalanus gracilis</i>	80	73	10				1		1	
<i>A. longicornis</i>									10	4
<i>A. gibber</i>									2	1
<i>Calocalanus plumulosus</i>								1		
<i>C. pavo</i>									25	5
<i>Clausocalanus pergens</i>								1		
<i>Clausocalanus arcuicornis</i>						1	4		11	
<i>Ctenocalanus Longicornis</i>	5					10	21		10	12
<i>Pseudocalanus minutus</i>						1				
<i>Euchaeta marina</i>	67	1	2	2	17		3			
<i>E. m. larvae</i>	64	12			7					
<i>E. larvae</i>				9		18			28	3
<i>Scolecithricella minor</i>					1					
<i>S. bradyi</i>						1				
<i>Centropages abdominalis</i>							1	2		
<i>Temora discaudata</i>							7		10	6
<i>T. stylifera</i>								2	6	8
<i>Candacia pectinata</i>										
<i>C. discaudata</i>							2	1		
<i>C. larvae</i>						5				4
<i>Labidocera japonica</i>										1
<i>Acartia clausi</i>					2	2		4	15	
<i>A. spinicauda</i>									34	26
<i>Oithona plumifera</i>	16	18	43	1		71	34	52	36	11
<i>O. similis</i>				73	47	30				3
<i>Oncaea venusta</i>	3	21	37	2	3	87	43	23	8	4
<i>Sapphirina gastrica</i>			1			1				
<i>S. ouronitens</i>								2		
<i>Corycaeus agilis</i>		1								
<i>C. japonicus</i>									30	9
<i>C. consinnus</i>									16	
<i>C. laevis</i>									7	
<i>C. gibbulus</i>									6	2
<i>C. speciosus</i>		2					1	1		
<i>C. spp</i>	8	8	12	100	17	14	8	4	2	2
<i>Copepoda larvae</i>	2	41	3	3	4	5	23	2	28	8
<i>C. nauplius larvae</i>		4			2	2	2		20	9
<i>Euphausia pellucida</i>			1							
<i>E. larvae</i>	63	8				10	36	23		

Month	April			May			June		September	
Station	04	06	5. 07	01	03	05	5. 8	05	03	05
Date	21	21	23	27	27	25	29	30	7	6
Time	09. 25	12. 35	09. 35	09. 25	06. 25	20. 00	21. 31	12. 00	04. 10	08. 25
Collected depth	50	50	50	50	50	50	50	50	50	50
Volume (cc)	4. 8	254	6. 0	1. 5	1. 0	2. 0	6. 5	5. 5	3. 0	5. 0
Biomass (mg/m ³)	79. 8	31. 9	30. 9	35. 2	25. 7	22. 9	62	63. 7	34. 7	54. 3
Rate of subsample	1/4	1/4	1/2	1/2	1/2	1/2	1/4	1/4	1/4	1/16
No. of total organisms	570	533	1. 553	563	368	379	930	969	596	321
No. of total the other organisms	—	—	—	4	—	—	—	23	—	—
ZOOPLANKTON										
E. sp				4	8		1		4	
Leptochella sp									2	
Lucifer raynaudii	1					1		1	2	
L. hanseni										12
L. h. larvae									8	15
Nyctiphanes australis									25	28
Parathemisto sp		1	3	29	14	2				
Sagitta larvae	2		9	22	20	8	7	5	45	17
S. sp			1							
Oikopleura longicauda									4	3
O. dioica		18								2
O. fusiformis										10
O. larvae					6					
O. sp	10		2	24		37	17	45	20	7
Podon Schmackeri							4	30		
Penilia schmackeri						1	457	662	14	10
Conchoecia sp	7			2	2	2	21			
Muggiaea atlantica	32	9	5		4	2		3		
M. sp				4						
Evadne tergestina							5	10		22
E. nordmanni							2			
Fritillaria pellucida				1				2		2
Obelia geniculata		2			2		8	8		
Balanus larvae				9	2	2	5	1	8	
Polychaeta larvae						1		2		
Liriope tetraphylla							6			
Doliolleta denticulatum	2	3	1				12			
Siphonantes horealis larvae							1			
Brachyura larvae									10	
Brachyscelus larvae				1	3					
Bivalves larvae	1			25	5	3		3		
Gastropoda larvae	1			173	88					
Thalia democratica		4								
Amphipoda sp				1						
Pelagic egg		1		3			1	1		
Cytemnestra scutellata		2	1	2	1	2				
Thalassinid sp			2			1	1			
Fish larvae				13	4		2		6	
Ophiopluteus larvae					7		2		4	5
Engraulis japonicus larvae							2			
Engraulis japonicus egg							28			3
Solumundella bitentaculata							10			
Polioletta denticulatum								16		
Lingula larvae										1
Fish scale	1									
Pyrocystis noctiluca	3	15	439	3	7	18				

L. 203선 부유생물 조사성적

Plankton Data, Line 203, 1964

Month	April		September
Station	02	03	01
Date	26	26	7
Time	04.00	02.10	06.55
Collected depth	50	50	50
Volume (cc)	8.0	3.5	3.0
Biomass (mg/m ³)	109.7	53	29.8
Rate of subsample	1/16	1/4	1/4
No. of total organisms	370	310	354
No. of total the other organisms	—	2	4

ZOOPLANKTON

<i>Calanus helgolandicus</i>	13	30	1
<i>C. pauper</i>			1
<i>Rhincalanus cornitus</i>		1	
<i>Paracalanus parvus</i>	193	118	68
<i>P. aculeatus</i>			9
<i>Acrocalanus gracilis</i>			36
<i>A. gibber</i>			1
<i>A. sp</i>		2	
<i>Calocalanus pavo</i>			10
<i>Clausocalanus pergens</i>			1
<i>Ctenocalanus longicornis</i>		2	1
<i>Pseudocalanus minutus</i>		5	1
<i>Euchaeta marina</i>	12	25	1
<i>E. marina</i> larvae	42	32	
<i>E. larvae</i>			1
<i>Scolecithrix danae</i>		1	
<i>Centropages abdominales</i>			1
<i>C. furcatus</i>			1
<i>Temora discauda</i>			36
<i>T. stylifera</i>			11
<i>Oithona plumifera</i>	30	14	39
<i>O. similis</i>			10
<i>O. nana</i>			11
<i>Setella gracilis</i>			1
<i>Oncaea venusta</i>	3	7	5
<i>Corycaeus japonicus</i>			15
<i>C. concinnus</i>			4
<i>C. spp</i>	5	29	
<i>Copepoda</i> larvae	5	14	18
<i>C. nauplius</i> larvae			1
<i>Euphausia</i> stages	3	5	
<i>Lucifer hansenii</i>			2
<i>L. h</i> larvae			2
<i>Parathemisto</i> sp	2	1	1
<i>Sagitta</i> larvae			15
<i>Oikopleura fusiformis</i>			7
<i>O. dioica</i>			4
<i>O. sp</i>	37	4	13
<i>Conchoesia</i> sp		4	1
<i>Mugiaca atlantica</i>	9	4	
<i>Evadne tergestina</i>			14
<i>Doliolum denticulatum</i>	1		
<i>Fritillaria haplostoma</i>			2
<i>Balanus</i> larvae	1		
<i>Brachyura</i> larvae	4		1
<i>Pelegic</i> egg		7	2
<i>Gastropoda</i> larvae	1		
<i>Thalassinid</i> sp		3	
<i>Lingula</i> larvae			1
<i>Fish</i> egg			1
<i>Pyrocystis noctiluca</i>	5		

Month	April				May			September		
Station	01	03	05	07	02	04	06	03	05	07
Date	23	23	24	25	23	23	23	6	6	6
Time	7.20	14.50	07.20	20.15	09.15	05.40	02.05	14.35	17.55	2120
Collected depth	50	50	50	50	50	50	50	50	50	50
Volume (cc)	2.5	10.0	18.0	9.0	3.0	38	14.0	5.5	4.0	6.0
Biomass (mg/m ³)	41.8	260.3	360.1	210	29.9	45.8	180.9	86.8	47.8	53.6
Rate of subsample	1/2	1/2	1/16	1/8	1/4	1/4	1/4	1/8	1/4	1/4
No. of total organisms	1.303	320	619	562	643	834	406	299	300	403
No. of total the other organisms	—	—	—	—	—	—	—	12	19	22
ZOOPLANKTON										
Copepoda larvae	5			1	16			11	16	18
C. sp						6	6			
C. nauplius larvae							1	11		3
Euphausia larvae					1				3	1
E. larval stage	43	3	33	41			10			
E. sp							112			
Leptochella sp									9	
Lucifer raynaudii	1									
L. hanseni								4	3	4
L. larvae								5	5	2
L. sp					2					
Nyctiphanes australis										5
Perathemisto sp	1	3	2	1						
Sagitta larvae	3	5	4		7	20	3	18	14	29
Oikopleura longicornis									4	3
O. fusiformis	7					2				7
O. dioica										3
O. sp		4		1	129	2	2	10	6	
Podon Schmackeri									1	5
Penilia schmackeri						6		7	3	1
Conchoecia sp	5	18		12	4	2	5	2	1	10
Muggiaea atlantica	3			11	2	1	1			
Evadne nordmanni				1						
E. tergestina					50	5		3		18
Ophiopluteus larvae								2		2
Fritillaria plicata					3				2	
F. haplostoma										2
Balanus larvae								1		
Doliolletta denticulatum	2				4		1	28	8	
Polychaeta larvae	1				5	3		5	3	
Brachyura larvae	2								1	
Amphipoda sp			3			2	3			
Pelagic egg	1				4					
Thalassinid sp	10	1			2					
Lucicutia ovalis	1									
Metridia lucens				1						
Pleuromamma gracilis				1						
Clytemnestra scutellata						1				
Regea confederata						6	75			
Salpa fusiformis						2	1			
Fish larvae					2		3			1
Limacina helicina								1		
Gastropoda larvae								1		
Engraulis japonicus egg									2	
Noctiluca scintillans		1								
Pyrocystis noctiluca	592	120	6		51	56	26			

N. 313선 부유생물 조사성적

Plankton Data, Line 313, 1964

Month	April			September
Station	02	03	04	02
Date	26	26	22	9
Time	00.15	23.00	19.20	0.25
Collected depth	50	50	50	50
Volume (cc)	20.0	3.5	4.0	3
Biomass (mg/m ³)	200	62	26.2	31.2
Rate of subsample	1/8	1/8	—	1/4
No. of total organisms	627	1,058	865	423
No. of total the other organisms	—	—	21	22
ZOOPLANKTON				
Calanus helgolandicus	41	2	2	4
C. pauper	1		14	4
Eucalanus subcrassus			2	
E. larvae				3
E. attenuatus		1	16	
Rhincalanus sp			1	
Paracalanus parvus	251	834	364	50
P. aculeatus				28
Acrocalanus gracilis	7			4
Calocalanus pavo				16
Clausocalanus pergens				1
C. arcuicornis			4	
Ctenocalanus longicornis	2	4	23	12
Euchaeta marina	20	9	9	15
E. m. larvae	38	41	14	
Scolecithricella minor				
Scolecithrix danae			4	
Centropages furcatus				1
C. abdominalis				1
Temora stylifera			3	7
T. discaudata				3
Candacia armata	2			
Acartia clausi				32
Oithona plumifera	13	58	76	18
O. similis				10
Settella gracilis				1
Oncaea venusta	6	30	205	11
Corycaeus japonicus				46
C. spp	9	29	1	4
Copepoda nauplius larvae	2			9
Copepoda larvae	60	7	4	22
Euphausia pellucida			1	
E. kirotobia stage	34	20	4	
E. larvae				10
Lucifer rayuandii	1			
L. hansenii larvae				4
Parathemisto sp	1	9		
Sagittalarvae	3	1	20	37
Oikopleura fusiformis			7	
O. sp	14	8	10	28
Penilia schmackeri				13
Conchoecia sp	2	3	2	2
Muggiaea atlantica			1	
Evadne nordmanni			3	
E. tergestina			2	
Doliolum denticulatum			1	1
Fritillaria pellusida				1
Balanus larvae			1	1
Bivales larvae			3	
Polychaeta larvae			6	
Fish larvae				1
Engraulis japonicus egg				1
Amphipoda sp		1		
Sappirina gastrica	1		1	
Clytemnestra scutellata		1	1	
Noctiluca scintillans	3			
Pyrocystis noctiluca	13		40	

O. 312선 부유생물 조사성적

Plankton Data, Line 312, 1964

Month	March			June	
Station	02	04	06	02	04
Date	27	27	27	27	23
Time	17.45	15.25	13.00	19.00	16.40
Collected depth	50	50	50	50	50
Volume (cc)	2.5	1.0	1.1	—	1.6
Biomass (mg/m ³)	33.9	22.7	28.7	17.1	33.2
Rate of subsample	1/2	—	1/2	—	1/2
No. of total organisms	1,027	740	551	320	523
No. of total the other organisms	13	—	—	—	43
ZOOPLANKTON					
<i>Calanus helgolandicus</i>	16	127	151		9
<i>Undinula darwinii</i>		2			
<i>C. pauper</i>					
<i>C. larvae</i>					
<i>Paracalanus parvus</i>	551	398	160	240	
<i>P. aculeatus</i>					
<i>Acrocalanus gracilis</i>				17	108
<i>Ctenocalanus longicornis</i>					
<i>Pseudocalanus gracilis</i>	10	1			
<i>P. minutus</i>					
<i>Euchaeta marina</i>	3				5
<i>E. flava</i>					
<i>E. japonica</i> juv					
<i>E. sp</i> juv					
<i>E. marina</i> juv	8	5	2		
<i>E. larvae</i>				31	23
<i>Scolecithricella minor</i>					
<i>Centropages abdominalis</i>			7		
<i>C. sp</i> juv					
<i>Candacia pectinata</i>		1			
<i>Acartia clausi</i>		1	9	3	1
<i>A. sp</i>					
<i>A. sp</i> juv					
<i>Oithona plumifera</i>	3	6	9		1
<i>O. similis</i>					7
<i>Oncaea venusta</i>	1	1			
<i>Corycaeus japonicus</i>					
<i>C. spp</i>	26	22	30	1	2
<i>Copepoda</i> larvae	294	140	71	23	307
<i>C. nauplius</i> larvae	9	2	2		4
<i>C. sp</i>					
<i>Euphausia</i> sp	1		4		
<i>E. larvae</i>				1	
<i>Nyctiphanes australis</i>	22				
<i>N. larvae</i>					
<i>Parathemisto</i> sp	1	2		1	5
<i>Sagitta</i> larvae	17	9	8	1	3
<i>S. sp</i>					
<i>Oikopleura</i> sp	2	13			4
<i>Podon</i> sp					
<i>Conchoecia</i> sp	2				
<i>Muggiaea atlantica</i>	4				
<i>M. sp</i>					
<i>Diphyes</i> sp	31	4	1		
<i>Ophiopluteus</i> larvae	2				
<i>O. sp</i>					
<i>Polychaeta</i> larvae	4	2			
<i>Brachyura</i> larvae					
<i>Salpa fusiformis</i>					
<i>Pelagic</i> egg	4	57	1	1	
<i>Thalassinid</i> sp	2	2		1	
<i>Gastropoda</i> larvae	1				
<i>Bivalves</i> larvae		2			
<i>Decapoda</i> sp		2			1
<i>Fish</i> scale					
<i>Shell</i> larvae					

June			December				
60	W ₁	W ₃	02	04	06	W ₂	W ₄
27	23	27	19	19	19	16	19
14.10	22.40	10.20	21.50	19.15	16.30	15.10	15.00
50	50	50	50	50	50	50	50
2.2	0.2	0.8	1.0	1.2	0.8	0.1	1.2
49	—	17.6	18.5	7.1	10.8	6.7	9.6
—	—	—	1/2	1/2	1/2	1/2	1/2
543	990	315	331	202	193	190	215
6	—	31	—	2	—	—	—
7	7	8	16	5	8		10
1			1		1		6
380	772	211	178	111	70	98	128
68	4	12	4				
		3					
3	12		1				
			1	2	1		
			1				
22	6	2	3				
			23	8	2		2
						2	
3	8	11			1	7	
			1				1
4	2	6	20	6	23	18	6
	135	2					
			1				
2	1	5	15	7	27	35	13
31	18		4	3	2	8	2
4							
		5		1			
						8	
6	24	4			2		1
3		2					
			45	36	43	1	31
3		1	1	1	1	1	
		2		2		2	
					1		
						2	
		1					
		1					
		1				1	
		7					
1							
			16	18	11	1	21

P. 311선 부유생물 조사성적

Plankton Data, Line 311, 1964

Month	March		June			December	
Station	04	06	04	06	08	05	07
Date	26	24	27	25	25	19	19
Time	07.30	19.40	08.20	20.40	17.50	07.40	12.40
Collected depth	20	50	40	50	50	50	50
Volume (cc)	4.9	2.8	0.5	5.0	1.7	1.0	0.8
Biomass (mg/m ³)	66.4	43.9	17.6	160.7	42.6	16.8	15.1
Rate of subsample	1/2	1/2	—	—	—	1/2	1/2
No. of total organisms	969	919	230	584	2	230	128
No. of total the other organisms	13	—	—	37	—	—	—
ZOOPLANKTON							
Calanus helgolandicus	43	5		74		33	
C. larvae						4	
C. sp. juv							1
Paracalanus parvus	546	739	137	297		108	49
P. aculeatus						2	1
Acrocalanus gracilis			7	40			
Euchaeta japonica						1	
E. marina juv			20	40			
E. sp. juv						4	2
E. marina				23			
Centropages abdominalis	8						
Temora stylifera			1				
Labidocera japonica	5						
L. euchaeta						1	
L. Kroyeri						2	
Acartia clausi	20	6		1			
A. sp. juv						1	1
Oithona plumifera	24	6		3		15	19
O. similis			3	21			
O. nana		1					
Setella gracilis						1	
Oncaea venusta	1						
Corycaeus japonicus						4	7
C. spp	245	48	6		1		
Copepoda larvae	15	43	41	27			2
C. nauplius larvae	11						
Euphausia sp						20	14
E. nauplius larvae	3						
Parathemisto sp	3	2		15			1
Sagitta larvae	51	66	1	2			
S. sp						20	14
Oikopleura dioica				1			
O. sp			6			2	2
Conchoecia sp			1				
Polychaeta larvae		1					
Thelesinid sp			2				
Decapoda sp			2				
Pelagic egg	6	1					
Amphipoda sp	1	2					
Brachyscelus larvae			1				
Fish scale			1		1		
Shell larvae						12	15

Q. 310선 부유생물 조사성적

Plankton Data, Line 310, 1964

Month	March				June	December		
Station	01	03	05	07	07	03	06	08
Date	23	24	24	24	25	17	17	17
Time	08.40	07.00	09.30	12.00	12.00	07.15	10.35	13.00
Collected depth	20	20	50	50	—	20	50	50
Volume (cc)	—	0.4	0.4	0.2	0.8	0.5	0.2	0.1
Biomass (mg/m ³)	—	4.3	2.6	1.5	19.2	5.0	5.5	1.1
Rte of subsample	—	—	—	—	—	1/2	2/1	—
No of total organisms	139	462	175	42	547	173	127	—
No of total the other organisms	—	—	1	—	3	—	—	—
ZOOPLANKTON								
Calanus helgolandicus	5	16	21		1	5	1	
C. finmarchicus	2							
C. plumchrus			1					
C. larvae						7		
Paracalanus parvus	38	109	17	3	395	114	47	32
Acrocalanus gracilis					2			
Euchaeta marina					1			
E. marina juv					63			
E. sp juv						1		
Scolecithricella minor	1	4						
Centropages abdominalis	1		5			1		2
Metridia lucens	5			2				
Labidocella japonica					1			
L. sp						1		
Acartia clausi	12	6	14	2	2			4
A. sp juv								8
Oithona plumifera	5	4	2	4		2	23	3
O. similis					1			
Corycaeus japonicus						26	43	32
C. spp	41	76	39	26	6			
Copepoda larvae	20	50	21	5	58	6	6	6
Euphausia nauplius larvae		1						
E. sp	1							
Nyctiphanes australis								1
N. australis larvae						6		
Parathemisto sp	2				1			
Sagitta larva	1	4	16		4			
S. sp						18	10	1
Oikopleura sp	3					6	4	
Muggiaea sp						6		
Pelagic egg		192	38				4	41
Ophiopluteus larvae	1							
Evadne tergestina	1							
Thalassinid sp								1
Decapoda sp						3		
Brachyura larvae					7	2		
Engraulis japonicus					2			
Shell larvae						65	25	

R. 309선 부유생물 조사성적

Plankton Data, Line 309, 1964

[illegible]

ZOOPLANKTON									
Calanus helgolandicus	5	20	9	8	55	35	4	1	
C. finmarchicus	2								
C. sp				3					
Paracalanus parvus	38	176	33	127	482	622	156	70	134
Acrocalanus gracilis					10		3		
Euchaeta marina					10	3			
E. marina juv				2	40	3			
E. juv							8		
Scolecithricella sp	1								
Centropages abdominalis	1	27	50		3	2			
C. sp juv									2
Metridia lucens	5								
Labidocera japonica				1					
L. euchaeta							1		
Acartia clausi	12	74	63	5	6	48			
A. sp juv									1
Oithona similis				1	9	15			
O. plumifera	5	44	37	1		3		18	21
Eutерpe acutifrons								1	
Corycaeus aculeatus							1		
C. japonicus							23	24	28
C. spp	41	177	130	25	13	18			
Copepoda larvae	18	29	97	7	144	17	3	1	24
C. nauplius larvae	2		7						
C. n. sp		6		3	11	3	7		2
Euphausia larvae				32		10			
E. sp	1	20			6			1	
Nyctiphanes australis			5						
N. australis larvae							1	1	11
Sagitta sp	1	35	2		3	7	11	11	11
Oikopleura dioica					6	7	5		
O. sp	3	9	12		11	7	5		4
Muggiaea sp							6		
Evadne tergestina	1								
Ophiopluteus larvae	1		13		8	20			
O. sp							1		
Polychaeta larvae		1	3						
Pelagic egg		69	321			2		7	
Amphipoda sp								1	
Engraulis japonicus egg					2	5			
Parathemisto sp	2	8	1	1	2	7			
Gastropoda larvae		3							
Thalassinid sp			107						
Pontopopsis sp juv							1		
Fish scale							1		
Shell larvae							97	7	

제 3 편

특 별 해 양 관 측 성 적



PART 3

MISCELLANEOUS OCEANOGRAPHIC OBSERVATIONS

1964

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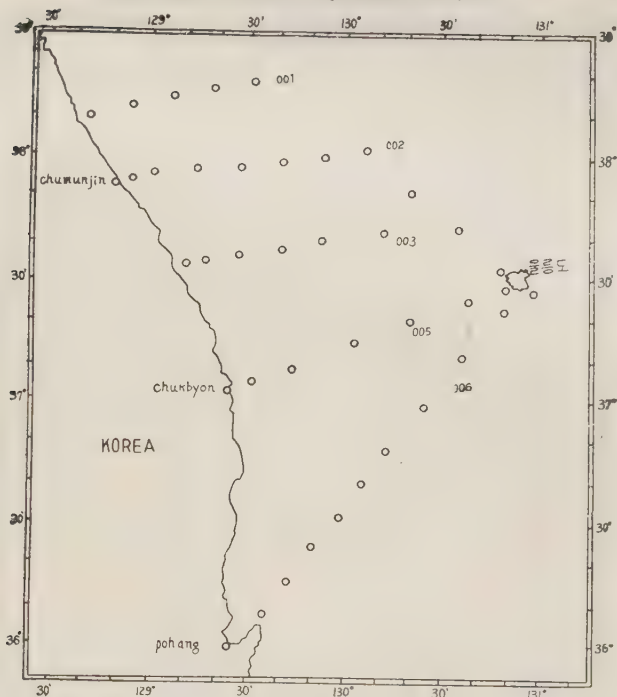
동 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS
EAST COAST

1 9 6 4

동해 해양관측점 위치도

Station Locations, East Coast



동해 해양관측점 위치표

Position of Oceanographic Stations, East Coast

Line Sta. No.	001	002	003	005	006
01	38°10'20" 128°40'55"	37°54'00" 128°52'42"	37°33'45" 129°10'50"	37°04'04" 129°31'15"	36°07'12" 129°33'30"
02	38°12'30" 128°53'05"	37°54'30" 128°59'00"	37°34'30" 129°16'40"	37°08'32" 129°43'42"	36°15'00" 129°41'10"
03	38°14'00" 129°06'00"	37°56'09" 129°15'00"	37°35'55" 129°21'45"	37°13'40" 130°01'00"	36°23'00" 129°48'50"
04	38°15'15" 129°18'30"	37°57'24" 129°27'30"	37°36'45" 129°39'00"	37°18'30" 130°18'40"	36°30'50" 129°56'10"
05	38°16'40" 129°31'05"	37°58'35" 129°39'52"	37°38'30" 129°51'30"	37°23'30" 130°36'20"	36°38'30" 130°04'00"
06		37°59'45" 129°52'11"	37°40'15" 130°10'00"	37°26'45" 130°48'00"	36°46'20" 130°11'50"
07		38°00'48" 130°04'40"			36°58'00" 130°23'00"
08		37°51'22" 130°19'30"			37°10'00" 130°34'30"
09		37°42'20" 130°34'00"			37°21'40" 130°46'30"
10		37°33'00" 130°48'40"			37°26'15" 130°55'00"

A. 001선 해양관측성적

Oceanographic Data, Line 001

Date		① October 1964					② November 1964	
Sta. No.		01	02	03	04	05	01	02
Day		28	28	28	28	28	26	26
Item	Time Z(m)	0645	0815	0950	1125	1315	0455	0320
T	0	17.50	17.00	18.00	17.50	17.50	12.3	12.5
	10	7.00	7.00	18.00	17.70	17.80	12.3	12.5
	25	4.90	5.90	7.90	17.50	17.30	12.0	12.3
	50	3.30	5.40	6.50	10.60	10.50	8.6	11.7
	100	1.90	2.60	2.60	3.20	2.50	—	3.5
	150	—	2.00	2.10	2.00	2.00	—	2.0
	200	—	1.50	1.90	1.90	1.80	—	1.9
Botm.		1.60	—	—	—	—	—	—
S	0	32.99	32.94	33.08	32.83	—	—	—
	10	32.90	32.83	32.67	32.97	—	—	—
	25	33.35	33.15	33.97	32.99	—	—	—
	50	33.96	33.86	34.16	34.09	—	—	—
	100	33.42	34.04	34.04	34.04	—	—	—
	150	—	33.73	34.07	34.04	—	—	—
	200	—	34.09	34.13	34.02	—	—	—
Botm.		34.00	—	—	—	—	—	—
Depth (m)		130	—	—	—	—	—	—
Secchi (m)		17	17	21	18	18	—	—
Color		—	—	—	—	—	—	—
Sea		2	2	2	3	3	1	2
Swell		1	1	1	1	1	1	1
Air Temp. (°C)		14.6	14.6	17.2	16.9	17.0	6.2	8.9
Baro. (mm)		—	—	—	—	—	—	—
Wind		SW. 2	SW. 3	SW. 2	NW. 5	NW. 5	W. 2	W. 3
Cloud		0	0	0	Cu. 5	Cu. 7	0	0
Weather		B	B	B	BC	BC	B	B

			③ December 1964				
03	04	05	01	02	03	04	05
26	25	25	10	10	12	12	13
0130	2330	2100	1315	1450	1010	1125	1650
12.3	11.9	14.7	11.5	11.0	9.1	11.0	12.8
12.3	11.5	14.6	11.0	10.8	9.3	10.5	12.9
12.0	11.5	13.4	10.8	10.6	7.8	10.3	12.9
11.7	9.4	6.8	9.5	10.3	7.0	10.0	11.5
3.4	2.6	3.1	2.7	3.4	4.0	3.4	4.0
2.2	2.0	2.3	—	2.3	2.2	2.1	2.4
2.0	1.6	2.7	—	1.6	1.6	1.8	1.8
—	—	—	—	—	—	—	—
—	—	—	33.78	33.93	33.91	34.07	34.13
—	—	—	33.93	33.95	33.93	34.09	34.40
—	—	—	33.95	33.96	33.95	34.11	34.34
—	—	—	34.00	33.96	33.95	34.11	34.45
—	—	—	34.31	34.27	34.27	34.15	34.47
—	—	—	—	34.29	34.29	34.24	34.47
—	—	—	—	34.31	34.31	34.27	34.47
—	—	—	—	—	—	—	—
—	—	—	150	—	—	—	—
—	—	—	15	12	14	13	14
—	—	—	—	—	—	—	—
2	3	3	—	—	3	3	3
2	2	2	1	1	2	2	2
7.1	9.7	7.6	7.9	7.5	2.3	1.5	5.3
—	—	—	—	—	—	—	—
W.4	W.4	W.3	S.2	S.2	NE.3	NE.3	W.4
—	—	0	Cl. 10	Cl. 10	—	—	Cl. 10
B	B	B	C	C	B	B	C

③ August 1964			④ October 1964					
01	03	04	01	02	03	04	05	06
26	26	26	27	27	27	27	27	27
1045	1205	1405	1240	1155	1025	0845	0700	0530
23.0	23.6	24.0	18.00	17.80	18.00	18.00	18.40	17.90
22.9	23.3	23.6	17.50	17.50	11.00	10.50	18.40	18.00
22.6	14.0	9.5	15.50	14.50	10.50	10.30	16.50	15.00
—	4.8	4.0	3.00	4.00	6.00	5.90	6.90	8.90
—	2.7	2.4	—	2.40	2.50	2.40	3.00	3.50
—	—	—	—	1.90	2.00	1.90	1.90	2.40
—	—	—	—	1.50	1.50	1.50	1.50	—
—	—	—	—	—	—	—	—	—
—	—	—	32.81	32.49	32.86	32.85	32.61	32.63
—	—	—	32.90	32.85	32.88	33.19	32.81	32.70
—	—	—	33.48	33.33	33.04	33.30	33.13	33.68
—	—	—	34.04	34.11	33.69	33.35	33.91	33.96
—	—	—	—	—	33.80	33.44	33.95	33.96
—	—	—	—	—	33.96	33.77	34.00	33.96
—	—	—	—	—	—	34.07	34.04	—
—	—	—	—	—	—	—	—	—
—	—	—	50	—	—	—	—	—
5	21	21	20	20	21	20	18	—
—	—	—	—	—	—	—	—	—
2	2	2	2	2	2	2	3	3
2	2	2	1	1	1	1	1	1
23.7	24.5	24.0	14.5	15.5	15.7	16.5	14.5	15.3
—	—	—	—	—	—	—	—	—
NE. 3	NE. 3	NE. 3	SW. 2	SW. 2	SW. 2	SW. 3	SW. 4	SE. 3
Ns. 9	Ns. 3	Ns. 8	0	0	0	0	0	0
C	BC	C	B	B	B	B	B	B

Date						⑤ November 1964				
Sta. No.		07	08	09	10	01	02	03	04	05
Day		27	27	26	26	25	25	25	25	25
Item	Time Z(m)	0340	0130	2323	1600	1230	1310	—	1640	1815
T C	0	18.90	19.60	19.90	19.80	13.0	13.5	12.5	14.0	14.0
	10	19.00	19.90	20.00	20.00	13.0	13.4	12.5	14.0	13.5
	25	18.00	19.60	19.90	20.00	12.9	12.7	12.2	14.0	13.2
	50	13.50	14.90	13.40	15.00	12.5	10.4	8.4	7.1	5.8
	100	3.90	7.60	7.40	12.00	—	3.7	3.3	3.5	3.0
	150	3.00	2.60	—	6.50	—	2.4	2.5	2.0	1.8
	200	—	—	—	3.00	—	1.7	2.2	2.0	2.0
	Botm.	—	—	—	—	12.5	—	—	—	—
S ‰	0	32.41	32.68	32.72	32.72	—	—	—	—	—
	10	32.66	32.79	32.83	32.88	—	—	—	—	—
	25	32.81	32.86	32.88	32.88	—	—	—	—	—
	50	33.75	33.86	32.90	33.75	—	—	—	—	—
	100	33.77	33.91	33.91	34.18	—	—	—	—	—
	150	33.78	33.91	33.95	33.96	—	—	—	—	—
	200	—	—	—	33.95	—	—	—	—	—
	Botm.	—	—	—	—	—	—	—	—	—
Depth (m)		—	—	—	—	—	—	—	—	—
Secchi (m)		—	—	—	17	—	—	—	—	—
Color		—	—	—	—	—	—	—	—	—
Sea		3	3	3	2	1	1	2	2	2
Swell		1	1	1	1	1	1	1	1	2
Air Temp. (°C)		15.7	16.3	17.3	18	—	12.5	10.7	9.2	10.7
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		SE.4	SE.4	S.4	E.2	0	E/N.5	NW.2	NW.2	SW.4
Cloud		Cu.3	—	Cu.5	Cu.8	0	0	0	0	0
Weather		BC	B	BC	C	B	B	B	B	B

⑥ December 1964										
1	2	3	4	5	6	7	7'	8	9	10
13	13	13	13	13	13	13	14	15	15	15
0330	0430	0630	0815	0915	1130	1300	1735	0850	1035	1235
8.5	10.7	9.8	10.0	13.0	13.3	13.0	10.9	14.0	14.6	16.5
11.3	10.8	10.0	10.0	13.1	13.3	13.3	10.7	14.3	15.0	16.7
11.4	10.8	10.0	10.1	12.7	13.4	13.5	10.3	12.6	14.8	16.7
11.0	9.9	9.8	6.6	10.0	12.5	12.5	9.5	11.3	14.0	16.7
—	3.5	5.2	3.7	3.2	14.3	4.4	3.4	4.0	5.3	14.7
—	2.5	2.6	2.5	2.1	2.3	2.5	2.5	2.5	2.5	3.5
—	—	1.8	1.8	1.5	1.4	1.6	—	1.5	1.7	3.4
—	—	—	—	—	—	—	—	—	—	—
34.09	34.07	33.89	34.02	34.15	33.93	34.29	—	—	—	—
34.05	33.93	33.93	33.98	34.20	34.11	34.49	—	—	—	—
34.11	34.07	33.93	34.27	33.95	34.31	34.45	—	—	—	—
34.18	33.91	33.93	34.11	33.95	34.29	34.29	—	—	—	—
—	34.24	34.22	34.13	34.11	34.42	34.33	—	—	—	—
—	34.29	34.25	34.29	34.31	34.29	34.31	—	—	—	—
—	—	34.13	34.25	34.20	34.22	34.29	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	165	—	—	—	—	—	—	—	—	—
—	—	—	14	14	14	15	—	14	15	16
—	—	—	—	—	—	—	—	—	—	—
2	2	2	2	2	3	3	2	3	3	3
1	2	2	1	1	2	2	1	2	2	2
3.2	3.5	3.9	4.0	5.7	5.4	6.9	13.2	1.6	5.2	8.6
—	—	—	—	—	—	—	—	—	—	—
W.4	W.5	W.4	W.3	W.2	SW.3	W.3	NW	NW.5	NW.4	NW.4
—	Cc.7	Ci.10	Ci.10	Cu.10	Ci.10	Ci.10	Cc.3	—	—	—
B	C	C	C	C	C	C	BC	B	B	B

C. 003선 해양관측성적

Oceanographic Data, Line 003

Date		① October 1964					② December 1964					
Sta. No.		01	02	03	04	05	1	2	3	4	5	6
Day		31	31	31	31	31	7	7	7	7	7	7
Item	Time Z(m)	1515	0650	0815	0945	1115	0705	0750	0920	1015	1240	1640
T °C	0	17.50	17.20	17.20	18.60	18.80	11.4	10.8	12.9	13.1	14.5	12.9
	10	17.50	16.90	17.50	18.90	19.10	11.6	10.6	12.4	13.1	14.2	12.4
	25	14.90	4.90	14.90	18.50	18.90	11.5	10.4	12.1	13.5	14.0	12.1
	50	2.80	1.90	8.60	9.40	11.00	11.3	10.0	11.4	12.5	13.8	11.4
	100	—	1.50	2.90	3.10	4.20	—	5.0	5.5	7.0	6.7	5.5
	150	—	1.40	2.50	2.30	2.20	—	2.5	2.5	3.5	3.2	2.5
	200	—	—	1.60	1.70	1.70	—	1.6	2.0	2.2	2.0	2.0
	otm.	—	—	—	—	—	—	—	—	—	—	—
S ‰	0	—	32.65	32.72	32.81	32.86	34.09	33.93	34.11	33.96	34.20	—
	10	—	33.06	32.88	32.86	—	—	33.86	34.02	34.29	34.15	—
	25	—	33.60	33.73	32.88	—	33.93	33.89	34.11	34.65	34.11	—
	50	—	33.86	34.15	33.96	—	33.93	33.93	34.72	33.95	34.22	—
	100	—	33.91	34.11	34.04	—	—	34.31	34.49	34.65	34.25	—
	150	—	33.95	34.05	34.07	—	—	34.31	34.42	34.31	34.29	—
	200	—	—	—	34.11	—	—	34.45	34.29	34.31	34.11	—
	Botm.	—	—	—	—	—	—	—	—	—	—	—
Depth (m)		85	—	—	—	—	50	275	—	—	—	380
Secchi (m)		15	15	17	16	13	—	12	16	15	14	16
Color		—	—	—	—	—	—	—	—	—	—	—
Sea		4	2	2	3	3	2	—	2	4	4	2
Swell		1	1	1	1	1	1	—	1	2	2	1
Air Temp. (°C)		16.5	13.1	14.8	14.7	16.5	1.9	2.1	1.5	3.0	7.0	5.2
Baro. (mm)		—	—	—	—	—	—	—	—	—	—	—
Wind		S.5	SW.3	SW.2	S.3	S.3	S.2	S.3	S.4	S.6	S.6	S.3
Cloud		Ns.10	Cl.5	Cl.8	Cb.10	Cb.10	—	—	—	—	—	—
Weather		C	BC	C	C	C	B	B	B	B	B	B

D. 005선 해양관측성적 Oceanographic Data, Line 005

Date		① March 1964			② May 1964		③ June 1964					
Sta. No.		01	02	03	01	02	01	02	03	04	01	02
Day		10	10	10	2	2	28	27	27	27	7	7
Item	Time	1340	1810	2007	0630	0910	0640	1945	1755	1530	0700	0230
	Z(m)											
T	0	11.00	10.4	10.4	13.6	13.5	16.3	16.7	18.0	17.6	18.3	19.4
	10	10.70	10.20	10.30	13.5	13.5	13.0	15.1	18.0	17.5	17.6	17.2
	25	10.70	10.00	9.50	11.9	13.4	8.7	12.2	17.4	15.7	16.9	15.9
	50	10.60	7.50	5.10	10.1	10.7	4.5	8.2	12.4	14.4	14.0	12.6
	100	9.40	4.00	4.20	—	5.4	—	3.5	8.9	7.5	—	9.8
C	150	8.80	3.40	—	—	—	—	—	2.9	4.4	—	3.2
	200	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	3.6	—	—	—	—	—	—	—
S	0	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—
‰	150	—	—	—	—	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	—	—	—	—	—	—
Depth (m)		—	—	—	—	—	—	—	—	—	—	—
Secchi (m)		23	14	—	12	12	16	—	21	15	—	—
Color		—	—	—	—	—	—	—	—	—	—	—
Sea		2	1	2	3	3	0	—	5	4	1	2
Swell		1	1	1	M	M	3	3	2	2	2	2
Air Temp. (°C)		11.5	8.7	9.4	11.5	11.5	19.9	19.0	19.8	19.4	13.9	—
Baro. (mm)		—	—	—	—	—	—	—	—	—	—	—
Wind		NW.3	NW.2	NE.2	N.4	N.4	NW.2	S.7	S.6	SW.4	W.3	—
Cloud		—	—	—	St.10	St.10	Cl.5	—	Cl.3	Cu.9	—	2
Weather		B	B	B	C	C	BC	B	BC	C	B	B

Date		④ June 1954				⑤ August 1964		⑥ October 1964			
Sta. No.		03	04	05	06	01	02	01	02	03	04
Day		7	7	7	7	22	22	25	25	25	26
Item	Time Z(m)	0505	0710	0745	1030	0535	0720	1040	1235	1435	1015
T °C	0	17.2	16.8	16.8	17.9	29.0	20.4	17.80	18.00	18.10	19.50
	10	17.0	16.4	16.8	16.0	25.5	20.4	18.00	18.00	19.20	19.70
	25	16.4	15.8	16.3	15.0	16.5	15.1	17.80	13.50	16.20	19.90
	50	10.0	15.3	12.1	9.5	11.0	10.3	6.50	5.90	7.70	10.50
	100	10.1	10.6	10.7	5.1	6.3	4.1	—	2.90	3.30	4.30
	150	4.2	5.6	2.6	3.0	—	—	—	2.20	2.20	2.50
	200	—	—	—	—	—	—	—	1.80	1.70	1.80
	Botm.	—	—	—	—	—	—	2.30	—	—	—
S ‰	0	—	—	—	—	—	—	32.74	32.66	32.66	32.66
	10	—	—	—	—	—	—	32.85	32.92	32.66	32.83
	25	—	—	—	—	—	—	33.64	33.66	33.53	32.92
	50	—	—	—	—	—	—	33.93	33.86	34.20	34.04
	100	—	—	—	—	—	—	—	33.95	34.22	34.05
	150	—	—	—	—	—	—	—	33.96	34.09	34.16
	200	—	—	—	—	—	—	—	34.09	34.07	34.18
	Botm.	—	—	—	—	—	—	34.11	—	—	—
Depth (m)		—	—	—	—	100	—	—	—	—	—
Secchi (m)		16	15	15	15	15	14	10	14	15	16
Color		—	—	—	—	—	—	—	—	—	—
Sea		3	4	4	5	—	—	4	4	3	1
Swell		2	1	1	2	—	—	1	1	1	1
Air Temp. (°C)		19.7	19.8	20.1	19.8	28.0	25.0	13.4	14.4	14.5	18.5
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		S. 5	S. 5	W. 3	SW. 6	NW. 4	NW. 4	NW. 5	NW. 4	SE. 3	E. 1
Cloud		Cl. 4	Cl. 4	Cl. 4	Cl. 3	—	—	Cu. 10	Cu. 9	Ns. 6	Cu. 3
Weather		BC	BC	BC	BC	C	C	C	C	BC	BC

		⑦ November 1964				⑧ December 1964						
05	06	01	02	03	40	01	02	03	40	05	06	02'
26	26	22	22	23	23	5	5	5	5	15	15	17
1230	1410	2125	2320	2110	0500	1240	1420	1620	1810	1515	1345	1730
19.50	19.90	13.2	13.9	17.0	18.5	13.0	12.4	13.2	15.6	15.1	16.2	16.4
19.70	19.90	13.5	14.0	17.1	18.5	12.8	12.4	13.1	15.6	15.3	16.5	—
19.90	19.90	13.5	13.9	17.0	18.5	12.5	12.2	12.7	16.0	15.3	16.5	—
10.50	14.00	8.7	11.6	16.0	18.3	11.4	12.0	12.5	15.4	15.0	16.0	—
4.30	11.90	5.2	5.0	19.8	15.4	2.6	4.2	4.5	6.0	11.6	14.1	—
2.50	6.50	—	4.5	3.6	5.3	—	2.5	3.1	3.6	2.6	3.5	—
1.80	3.00	—	3.1	3.6	3.5	—	1.7	2.2	2.7	2.5	3.2	—
—	—	—	—	—	—	—	—	—	—	—	—	—
32.68	32.70	—	—	—	—	35.14	34.00	34.07	34.33	—	—	—
33.13	32.79	—	—	—	—	33.96	33.93	33.93	34.18	—	—	—
33.15	33.13	—	—	—	—	33.98	34.13	34.93	34.24	—	—	—
34.04	33.98	—	—	—	—	33.95	34.63	33.93	34.27	—	—	—
34.20	34.05	—	—	—	—	34.45	34.40	34.31	34.47	—	—	—
34.22	34.09	—	—	—	—	—	—	34.47	34.45	—	—	—
34.22	34.11	—	—	—	—	—	34.63	34.29	34.31	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
17	16	—	—	—	—	—	—	—	—	15	15	—
—	—	—	—	—	—	—	—	—	—	—	—	—
1	2	4	5	4	4	2	3	2	3	3	3	—
1	2	2	2	2	2	1	1	1	2	2	2	1
18.5	18.4	16.7	11.5	12.3	10.6	10.5	11.0	10.0	12.2	10.5	8.9	10.7
—	—	—	—	—	—	—	—	—	—	—	—	—
E. 1	E. 1	SW. 4	SW. 4	SW. 4	SW. 4	S. 3	S. 4	S. 4	SW. 5	NW. 5	NW. 5	—
Cu. 2	Cu. 8	—	—	—	—	—	—	Cu. 2	—	—	—	Ci. 3
B	C	C	C	C	C	B	B	B	B	B	B	BC

E. 006선 해양관측성적

Oceanographic Data, Line 006

Date		① March 1964				② April 1964					
Sta. No.		01	02	03	04	01	02	03	04	05	06
Day		6	6	10	10	27	27	27	27	27	27
Item	Time Z(m)	1255	1410	0920	1102	0710	0900	1100	1230	1410	1600
T C	0	10.2	12.8	10.4	10.8	13.6	14.2	13.3	12.9	13.5	13.1
	10	10.2	12.2	10.4	10.7	13.6	14.1	12.9	12.7	12.7	12.7
	25	10.1	11.3	10.3	10.5	13.5	13.4	12.4	12.0	11.4	11.8
	50	9.4	10.2	10.2	10.4	—	12.1	10.2	10.4	10.7	10.1
	100	—	4.2	5.5	8.5	—	6.6	6.7	6.0	8.8	7.6
	150	—	2.7	4.0	5.7	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—	—
Botm.		—	—	—	—	13.1	—	—	—	—	—
S ‰	0	34.45	34.47	34.31	34.27	—	—	—	—	—	—
	10	34.36	34.34	34.27	34.24	—	—	—	—	—	—
	25	34.36	34.33	34.27	34.24	—	—	—	—	—	—
	50	34.33	34.25	34.13	34.18	—	—	—	—	—	—
	100	—	33.87	33.93	34.09	—	—	—	—	—	—
	150	—	33.86	33.86	33.75	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—	—
Botm.		—	—	—	—	—	—	—	—	—	—
Depth (m)		—	—	—	—	50	—	—	—	—	—
Secchi (m)		—	9	18	22	9	13.8	10	9	10	10
Color		—	—	—	—	—	—	—	—	—	—
Sea		—	—	2	2	1	3	3	4	4	3
Swell		—	2	1	1	1	2	2	2	2	2
Air Temp. (°C)		12.5	11.5	8.7	11.5	13.0	14.7	14.0	13.5	14.8	13.0
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		—	—	NW.2	NW.2	NE.3	NE.3	NE.3	NE.4	NE.4	NE.3
Cloud		Ns.10	Ns.10	—	—	0	—	—	—	—	—
Weather		C	C	B	B	B	B	B	B	B	B

[illegible]

			⑦ December 1964									
08	09	10	01	02	03	04	05	06	07	08	09	10
23	23	23	14	14	14	14	14	14	14	13	13	13
0812	1610	0435	1315	1203	0915	0700	0527	0348	0130	2325	2245	1940
20.6	19.8	19.4	13.50	15.10	16.10	16.60	16.60	16.90	15.30	15.60	15.60	15.70
20.47	19.80	19.41	13.42	15.11	15.73	16.34	16.50	16.66	15.22	15.74	16.11	15.44
21.34	20.04	19.89	13.28	15.14	16.08	16.76	16.77	16.99	15.65	15.95	16.24	15.86
15.89	17.68	17.16	—	14.20	16.02	16.64	16.86	17.13	15.46	15.84	16.33	15.89
6.25	12.03	14.47	—	—	16.15	16.73	15.32	16.32	15.50	15.41	16.27	15.84
3.04	7.12	12.98	—	—	3.12	6.18	6.07	4.07	8.79	13.38	12.45	10.87
1.67	3.35	6.20	—	—	1.42	2.55	2.43	2.32	2.92	3.14	3.03	3.74
0.98	1.17	1.62	—	—	0.76	1.05	0.98	1.14	1.15	1.18	1.14	1.32
—	—	—	12.49	7.05	—	—	—	—	—	—	—	—
32.54	33.17	33.31	34.45	34.43	34.45	34.60	34.42	34.43	34.56	33.84	33.87	33.89
32.70	33.06	32.99	34.11	34.38	34.61	34.60	34.22	34.51	34.43	33.66	33.98	33.89
33.06	32.95	32.97	34.27	34.43	34.43	34.27	34.40	34.51	34.27	33.51	34.07	33.75
—	34.25	34.25	—	34.70	34.43	34.43	34.43	34.61	34.25	33.98	33.73	33.55
34.16	34.36	34.43	—	—	34.42	34.43	34.60	34.60	34.24	34.25	35.50	34.09
34.05	34.16	34.36	—	—	34.25	34.43	34.43	34.22	34.45	34.60	34.78	—
34.04	34.00	34.20	—	—	34.25	34.07	34.43	34.22	34.45	34.42	33.71	33.46
34.00	34.00	34.24	—	—	34.43	34.40	34.52	34.25	—	34.38	34.05	33.87
—	—	—	34.34	34.43	—	—	—	—	—	—	—	—
—	—	—	36	85	—	—	—	—	—	—	—	—
—	24	—	14	15	24	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
4	0	3	3	2	4	4	5	5	5	5	4	3
3	1	1	1	1	2	2	3	3	3	3	2	1
18.9	17.6	18.5	8.8	8.9	4.6	4.2	4.4	5.9	7.4	8.4	8.3	7.9
779	779	777	780	780	782	781	781	781	780	780	780	780
N.6	E.1	N.5	NW.2	NW.2	NW.3	NW.3	NW.4	NW.4	NW.5	NW.5	NW.4	NW.3
Ci.6	Sc.10	Ci.10	Cc.3	Cc.4	Cc.8	Cu.4	Cu.2	0	Cu.10	Cu.9	Cs.8	Cu.9
BC	C	C	BC	BC	C	BC	B	B	C	C	C	C

F. 동해 해양관측성적 (3월)

Oceanographic Data, East Coast (March)

Date		Mach 1964									
Sta. No.		1	2	3	4	5	6	7	8	9	10
Day		4	4	4	10	12	12	12	12	12	13
Item	Time Z(m)	1403	1600	1800	0745	0820	0920	1020	1310	1510	1220
T (°C)	0	11.0	12.3	12.0	10.5	10.2	9.3	8.0	7.5	8.2	7.2
Depth (m)		8	—	—	17	—	—	—	—	—	—
Secchi (m)		—	—	—	—	—	—	—	—	—	—
Color		—	—	—	—	—	—	—	—	—	—
Sea		—	—	—	2	2	2	2	2	—	3
Swell		—	—	—	1	1	1	1	1	—	2
Air Temp. (°C)		11.5	11.0	8.5	7.3	8.0	6.7	6.7	7.4	8.1	4.0
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		0	0	0	NW.3	NW.2	NW.2	NW.2	NW.2	NW.2	NW.3
Cloud		—	—	—	—	Cu.5	Cc.10	Cc.10	Cc.10	Nb.6	Cu.10
Weather		B	B	B	B	BC	C	C	B	BC	C

Date		March 1964									
Sta. No.		11	12	13	14	15	16	17	18	19	20
Day		13	13	14	14	14	14	15	15	15	15
Item	Time Z(m)	1610	1710	1530	1630	1730	1830	1350	1430	1600	1700
T (°C)	0	6.3	4.5	8.5	8.8	10.3	10.0	9.5	10.8	11.2	10.0
Sea		3	3	—	—	—	—	—	—	—	—
Swell		2	2	—	—	—	—	—	—	—	—
Air Temp. (°C)		5.5	5.0	6.9	6.7	6.5	6.5	6.5	4.7	3.6	2.5
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		NE.2	NE.2	S.2	S.2	S.2	S.3	SW.2	SW.2	SW.2	SW.2
Cloud		Ns.7	Cu.10	Ns.4	Ns.4	Ns.7	Ns.6	—	Cb.10	—	—
Weather		C	C	BC	BC	BC	BC	S	C	B	S

동해 해양 관측점 위치표

Station Positions, East Coast (March)

동해 해양 관측점 위치도 (3월)

Station Locations, East Coast (March)



Sta No.	위 치	
	위 도	경 도
1	35°41'00"	129°37'30"
2	35°33'00"	129°30'20"
3	35°30'50"	129°28'00"
4	36°22'00"	129°36'00"
5	37°14'15"	129°23'20"
6	37°20'15"	129°17'20"
7	37°26'00"	129°13'00"
8	37°31'00"	129°10'00"
9	37°36'00"	129°09'00"
10	37°39'45"	129°08'15"
11	37°50'00"	129°00'30"
12	37°50'30"	128°54'00"
13	37°26'15"	129°13'00"
14	37°20'00"	129°18'05"
15	37°13'40"	129°22'45"
16	37°06'15"	129°26'15"
17	36°53'00"	129°27'20"
18	36°43'35"	129°36'34"
19	36°33'30"	129°29'30"
20	36°30'36"	129°28'00"

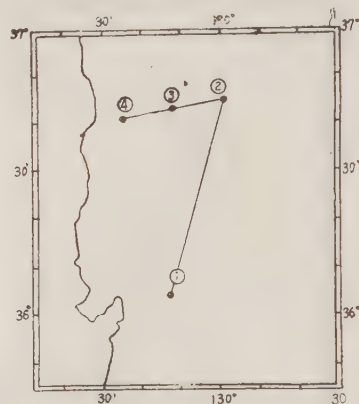
G. 동해 해양관측성적 (4월)

Oceanographic Data, East Coast (April)

Date		April 1964			
Sta. No.		1	2	3	4
Day		26	26	27	27
Item	Time	14.00	17.45	19.15	20.45
	Z (m)				
T °C	0	14.2	13.5	13.1	13.7
	10	13.9	—	—	—
	25	13.5	—	—	—
	50	12.6	—	—	—
	100	4.8	—	—	—
	Botm.	3.4	—	—	—
Depth (m)		13.0	—	—	—
Secchi (m)		9	—	—	—
Color		—	—	—	—
Sea		1	—	—	—
Swell		1	—	—	—
Air Temp. (°C)		13.0	12.3	12.7	12.5
Baro. (mm)		—	—	—	—
Wind		NE.3	NE.4	NE.4	NE.4
Cloud		0	0	0	0
Weather		B	B	B	B

해양관측점 위치도(4월)

Station Locations, East Coast (April)



해양관측점 위치표 (4월)

Station Positions, East, Coast(April)

Sta No.	1	2	3	4
위도	36°05' 00"	36°45' 00"	36°42' 25"	36°41' 00"
경도	129°49' 00"	130°00' 00"	129°47' 10"	129°35' 45"

H. 동해 해양관측성적 (5월)

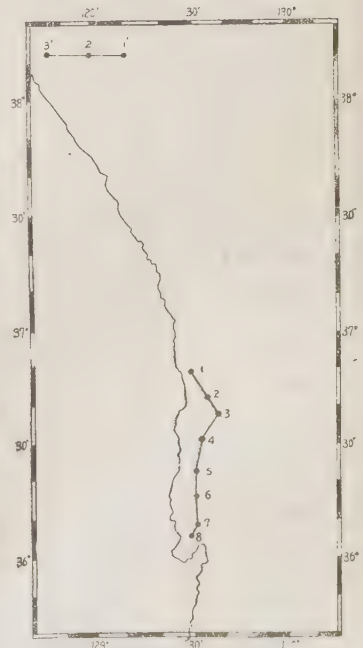
Oceanographic Data, East Coast (May)

Date		May 1964						
Sta. No.		① 36°05'00" 129°29'45"	② 36°43'30" 129°35'00"	③ 36°39'15" 129°23'45"	④ 36°32'00" 129°33'30"	⑤ 36°24'00" 129°30'50"	⑥ 36°16'30" 129°30'55"	⑦ 36°09'00" 129°31'00"
Day		2	2	2	2	2	2	2
Item	Time Z(m)	0820	0920	1020	1120	1230	1330	1430
T ℃	0	11.6	12.5	12.9	13.8	13.7	13.8	13.9
	10	—	—	—	13.7	—	—	—
	25	—	—	—	13.5	—	—	—
	50	—	—	—	11.6	—	—	—
Depth (m)		11.0	13.0	13.0	13.7	14.5	14.0	14.3
Wind		N.4	N.4	N.2	SW.3	SW.3	SW.3	SW.3
Cloud		3 t.4	St. 10	Sc. 10	Sc. 10	Sc. 10	Sc. 10	Sc. 10
Weather		C	C	C	C	C	C	C

해양관측점위치도(5월)

Station Locations, East Coast (May)

Date		May 1964			
Sta. No.		⑧ 36°09'20" 129°30'00"	⑩ 38°12'25" 129°07'40"	②' 38°12'25" 128°50'00"	③' 38°12'25" 128°41'30"
Day		2	29	29	29
Item	Time Z(m)	15.30	13.30	15.00	17.20
T ℃	0	13.5	16.2	16.3	16.2
	10	—	15.4	13.0	14.2
	25	—	6.6	7.2	8.0
	50	—	4.4	4.2	4.9
Air Temp. (C°)		14.3	14.3	—	—
Baro. (mm)		—	—	—	—
Wind		SW.3	—	NE.1	E.2
Cloud		Sc. 10	9	0	Cl. 1
Weather		C	B	B	B



I. 동해 해양관측성적 (8월)

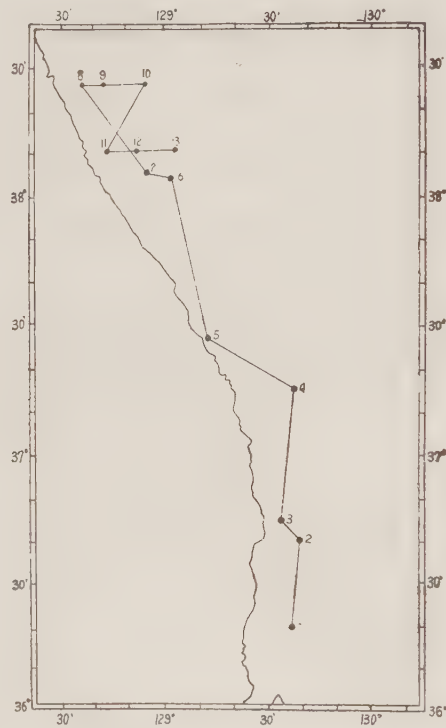
Oceanographic Data, East Coast (August)

Date		August 1964				
Sta. No.		① 36°21' 00" 129°36' 15"	② 36°40' 15" 129°38' 30"	③ 36°46' 00" 129°32' 15"	④ 37°16' 00" 129°36' 30"	⑤ 37°27' 30" 129°11' 15"
Day		21	21	21	22	22
Item	Time	07.00	11.30	14.00	08.30	11.15
	Z(m)					
T ℃	0	29.5	25.9	26.0	25.1	25.3
	10	—	—	—	20.4	—
	25	—	—	—	15.5	—
	50	—	—	—	10.0	—
	100	—	—	—	4.0	—
	Botm.	—	—	—	—	—
S ‰	0	—	—	—	—	—
	10	—	—	—	—	—
	25	—	—	—	—	—
	50	—	—	—	—	—
	100	—	—	—	—	—
	Botm.	—	—	—	—	—
Depth (m)		—	—	—	—	—
Secchi (m)		—	—	—	15	—
Color		—	—	—	—	—
Sea		—	—	—	—	—
Swell		—	—	—	—	—
Air Temp. (°C)		—	—	—	25.5	—
Baro. (mm)		—	—	—	—	—
Wind		—	—	—	NW. 4	—
Cloud		—	—	—	—	—
Weather		—	—	—	C	—

August 1964					
⑥ 28°05' 00" 129°00' 00"	⑦ 38°06' 00" 128°54' 00"	⑧ 38°26' 45" 128°34' 30"	⑨ 38°26' 45" 128°40' 30"	⑩ 38°26' 45" 128°53' 20"	⑪ 38°10' 30" 128°40' 30"
26	26	31	31	31	31
16.15	18.30	06.30	07.15	09.00	1230
24.0	23.7	22.5	23.0	23.6	22.5
23.6	23.5	21.5	22.6	23.3	22.0
15.2	17.6	18.7	19.0	12.5	18.6
5.5	8.6	10.5	7.8	5.7	11.8
3.5	—	5.8	4.0	3.5	6.5
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	14	15	17	16	10
—	—	—	—	—	—
2	0	—	—	—	0
1	0	—	—	—	0
24.0	23.5	24.0	23.8	24.5	23.0
—	—	—	—	—	—
NE. 3	N. 2	N. 2	N. 2	N. 2	S. 2
Ns. 8	Cu. 10	Cu. 10	Cu. 10	—	St. 10
C	C	C	C	C	R

Date		August 1964	
Sta. No.		⑫ 38°10'30" 128°49'15"	⑬ 38°10'30" 129°02'00"
Day		31	31
Time	Time	1310	1440
	Z(m)		
T °C	0	22.4	23.8
	10	21.8	23.5
	25	15.5	10.0
	50	9.4	5.3
	100	4.0	2.8
	Botm.	—	—
S ‰	0	—	—
	10	—	—
	25	—	—
	50	—	—
	100	—	—
	Botm.	—	—
Depth (m)		—	—
Secchi (m)		15	13
Color		—	—
Sea		—	—
Swell		—	—
Air Temp. (°C)		22.5	21.7
Baro. (mm)		—	—
Wind		S. 2	S. 2
Cloud		St. 10	—
Weather		R	R

동해 해양관측점 위치표 (8월)
Station Locations, East Coast (August)



J. 동해 해양관측성적 (10월)

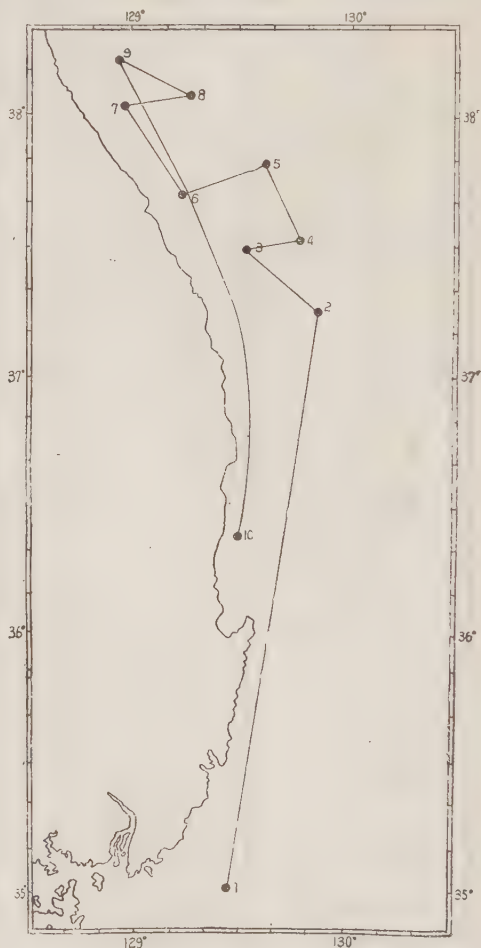
Oceanographic Data, East Coast (October)

Date		October 1964						
Sta. No.		1 35°00'00" 129°25'55"	2 37°15'00" 129°51'45"	3 37°28'55" 129°30'00"	4 37°30'35" 129°47'45"	5 37°48'30" 129°36'30"	6 37°41'45" 129°13'00"	7 38°02'25" 128°56'00"
Day		11	12	13	14	15	16	20
Item	Time	0830	1620	1700	1700	1705	1645	1650
	Z(m)							
T °C	0	22.6	19.5	19.0	19.6	18.8	19.0	17.7
	10	24.7	19.9	18.7	18.8	13.4	18.5	17.6
	25	21.5	16.9	8.2	13.2	—	—	11.1
	50	14.6	9.7	5.0	10.0	10.5	5.4	5.0
	100	10.6	—	3.4	3.3	8.5	3.6	3.5
	150	—	4.0	—	—	—	—	—
	200	—	—	3.2	3.1	4.9	5.4	2.9
Botm.		—	—	—	—	—	—	—
S ‰	0	—	—	—	—	—	—	—
	10	32.90	32.97	32.86	32.90	32.81	32.63	32.72
	25	33.37	33.13	33.68	—	—	—	—
	50	34.29	33.86	33.80	33.75	33.68	33.80	33.82
	100	34.31	—	33.80	—	33.80	33.87	33.84
	150	—	34.20	—	—	—	—	—
	200	—	—	33.80	33.82	33.66	33.87	33.86
Botm.		—	—	—	—	—	—	—
Depth (m)		88	130	210	—	—	—	—
Secchi (m)		15	15	14	12	18	17	11
Color		—	—	—	—	—	—	—
Sea		2	3	2	3	3	3	3
Swell		1	2	1	2	2	2	2
Air Temp. (°C)		19.0	20.0	19.6	19.9	19.6	20.2	15.0
Baro. (mm)		—	—	—	—	—	—	—
Wind		NE. 2	SE. 3	NW. 3	N	SE	SE	SE
Cloud		—	—	—	—	—	—	Cu. 9
Weather		BC	BC	BC	BC	B	BC	C

Date		October		
Sta. No.		8	9	10
		38°04'45" 129°15'03"	38°12'30" 128°53'05"	36°21'30" 129°29'05"
Day		22	24	26
Item	Time	0550	1700	1705
	Z (m)			
T	0	18.2	17.3	17.8
	10	17.5	17.3	17.7
	25	13.0	6.0	17.5
	50	5.2	5.6	6.2
	100	2.8	3.5	3.9
	150	—	—	—
°C	200	2.5	2.5	—
	Botm.	—	—	—
S	0	—	—	32.83
	10	32.72	32.99	32.83
	25	—	33.01	33.89
	50	33.75	34.13	33.50
	100	33.80	34.20	—
	150	—	—	—
‰	200	34.84	34.22	—
	Botm.	—	—	—
Depth (m)		—	—	—
Secchi (m)		15	11	12
Color		—	—	—
Sea		3	4	3
Swell		2	3	1
Air Temp. (°C)		16.5	14.4	17.4
Baro. (mm)		—	—	—
Wind		NW	NW	SE. 3
Cloud		Ns. 1	Ac. 4	Sc. 3
Weather		B	BC	BC

동해 해양관측점위치도(10월)

Station Locations, East Coast(October)



K. 동해 해양관측성적 (11월)
Oceanographic Data, East Coast (November)

Date		November 1964			
Sta. No.		1 36°31' 20" 129°39' 20"	2 36°33' 00" 129°57' 40"	3 36°21' 30" 129°29' 05"	4 36°22' 45" 129°41' 00"
Day		5	4	6	9
Item	Time	1700	1606	1650	1715
	Z (m)				
T	0	16.6	16.8	16.5	16.7
	10	16.5	16.6	16.5	16.8
	25	14.6	11.9	13.5	12.7
	50	9.2	4.2	4.2	5.6
	100	3.3	3.9	—	3.3
	150	—	—	—	2.5
°C	200	—	—	—	—
	Botm.	2.4	—	3.6	2.1
S	0	32.79	32.90	32.83	33.06
	10	32.86	32.90	32.83	33.06
	25	33.42	33.84	33.39	33.93
	50	33.42	33.86	33.50	33.96
	100	32.84	33.86	—	33.96
	150	—	—	—	33.96
‰	200	—	—	—	—
	Botm.	33.86	—	33.57	33.18
Depth (m)		170	—	93	185
Secchi (m)		—	—	12.5	—
Color		—	—	—	—
Sea		3	1	2	4
Swell		1	1	1	2
Air Temp. (°C)		13.3	15.9	13.0	13.4
Baro. (mm)		—	—	—	—
Wind		W. 3	NW. 1	W. 2	N. 4
Cloud		St. 7	Cc. 10	Ns. 3	Cc. 7
Weather		BC	CR	BC	BC

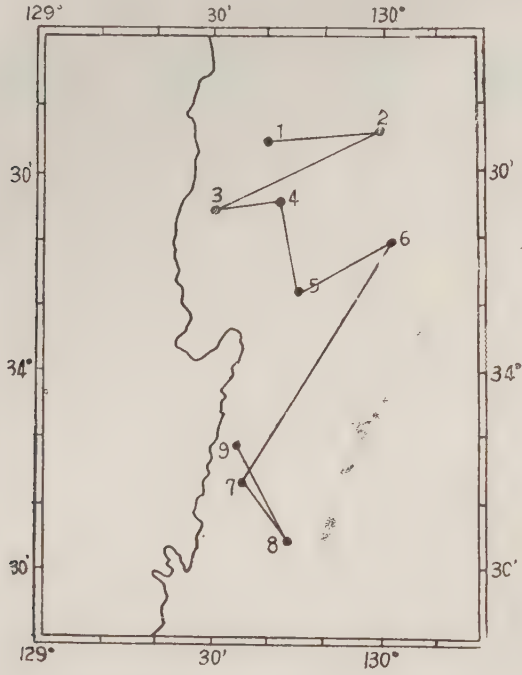
Date		November 1964				
Sta. No.		5 36°09' 10" 129°44' 20"	6 36°16' 40" 130°00' 45"	7 35°42' 00" 129°33' 10"	8 35°33' 00" 129°42' 45"	9 35°47' 10" 129°33' 15"
Day		15	11	29	28	30
Item	Time Z(m)	1650	1645	1635	1705	1655
T C	0	17.6	20.1	15.2	15.0	14.7
		17.4	20.1	14.9	14.8	14.8
	10	16.7	20.9	14.4	14.8	14.5
	25	5.8	18.3	13.3	14.0	—
		3.5	10.2	—	6.4	—
	50	—	3.7	—	—	—
	100	—	3.2	—	—	—
	Botm.	—	—	13.0	4.1	13.7
S ‰	0	33.10	33.19	33.57	33.33	33.57
		33.15	33.60	33.69	33.89	33.84
	10	33.22	33.73	33.71	34.00	34.04
	25	33.62	33.84	33.95	34.15	—
		33.78	33.84	—	34.52	—
	50	—	33.86	—	—	—
	100	—	33.86	—	—	—
	Botm.	—	—	34.22	34.36	34.38
Depth (m)		28	—	65	126	59
Secchi (m)		—	14	8	—	—
Color		—	—	—	—	—
Sea		4	3	2	1	3
Swell		3	1	1	1	1
Air Temp. (°C)		11.2	14.7	14.0	14.6	9.3
Baro. (mm)		—	—	—	—	—
Wind		N. 4	SW. 2	N. 2	NE. 1	NE. 3
Cloud		Cu. 2	Cu. 6	Cu. 10	Sc. 7	Ns. 1
Weather		BC	BC	C	BC	B

L. 동해 해양관측성적 (12월)
Oceanographic Data, East Coast (December)

Date		December 1964				
Sta. No.		1 35°43'30" 129°52'30"	2 35°48'30" 129°37'40"	3 35°57'55" 129°51'40"	4 35°51'30" 129°43'30"	5 35°24'30" 129°24'00"
Day		4	5	7	8	10
Item	Time	1630	1720	1735	1655	1723
	Z (m)					
T	0	17.7	15.2	18.3	16.3	13.7
	10	17.7	15.2	18.3	16.3	13.7
	25	17.4	14.7	18.3	16.0	—
	50	15.1	14.3	18.2	15.8	—
	100	12.6	—	6.1	8.9	—
C	150	6.7	—	4.6	—	—
	200	5.2	—	4.8	—	—
	Botm.	—	13.0	—	—	11.8
S	0	34.22	34.04	34.56	33.86	34.04
	10	34.09	34.04	34.49	34.07	34.05
	25	34.20	33.82	34.58	34.02	—
	50	33.86	34.02	34.45	33.95	—
	100	34.05	—	34.72	34.11	—
‰	150	33.98	—	34.04	—	—
	200	34.13	—	34.04	—	—
	Botm.	34.16	—	—	34.42	—
Depth (m)		—	—	—	—	31
Secchi (m)		11	—	12	—	—
Color		—	—	—	—	—
Sea		2	2	3	3	1
Swell		2	1	2	2	1
Air Temp. (°C)		8.5	10.3	6.7	6.9	7.5
Baro. (mm)		—	—	—	—	—
Wind		N. 2	W. 3	W. 3	W. 3	NW. 2
Cloud		St. 1	Ns. 3	Ac. 4	Cs. 3	Cu. 9
Weather		B	BC	BC	BC	C

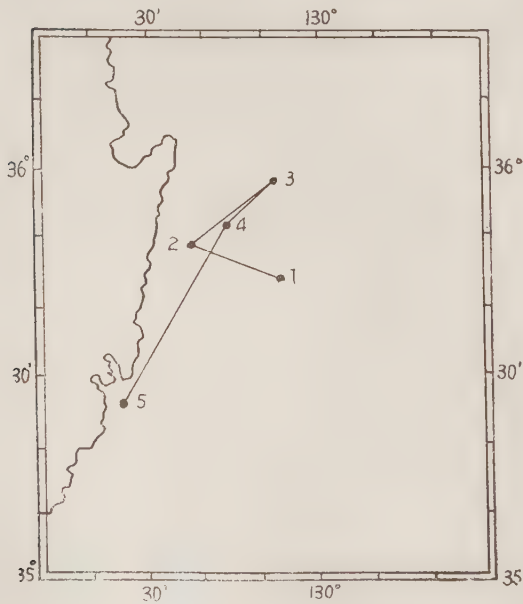
동해 해양관측점 위치도(11월)

Station Locations, East Coast (November)



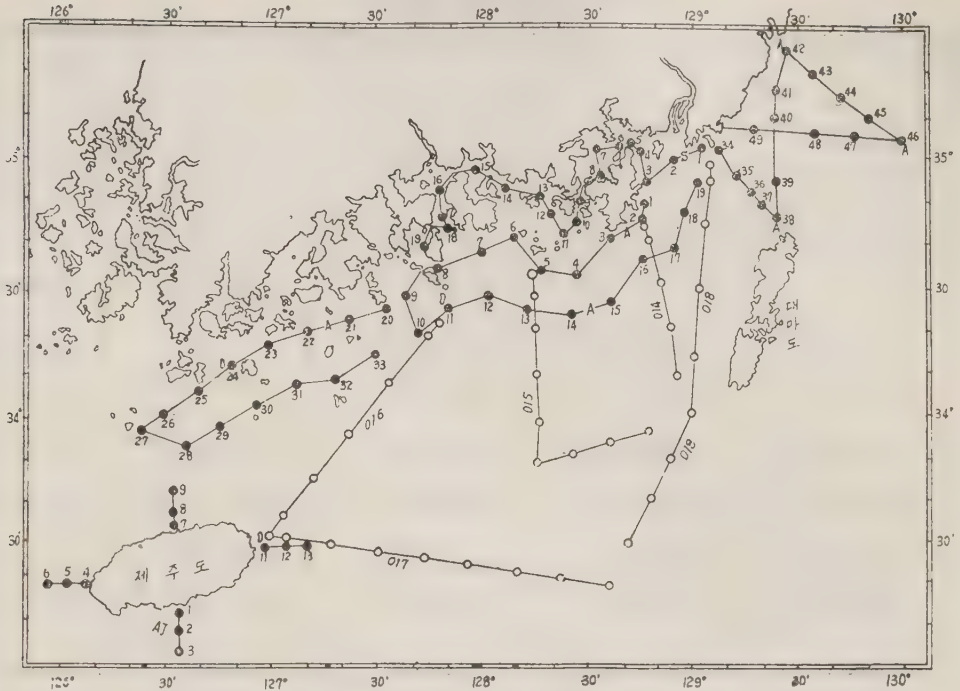
동해 해양관측점 위치도(12월)

Station Locations, East Coast (December)



남해 해양관측점 위치도

Station Locations, South Coast



남해 해양관측점 위치표

Station Positions, South Coast.

Line Sta. No.	S	AJ	014	015	016	017	018
1	35°02'00"	33°13'00"	33°44'05"	34°33'10"	34°21'55"	33°28'45"	34°58'00"
	129°00'00"	126°34'05"	128°45'00"	128°13'45"	127°46'25"	127°03'25"	129°05'02"
2	34°59'12"	33°08'10"	34°39'20"	34°27'50"	34°19'00"	33°26'50"	34°53'00"
	128°54'30"	126°34'05"	128°46'30"	128°13'50"	127°43'05"	127°16'57"	129°04'39"
3	34°54'30"	33°03'10"	34°30'30"	34°20'00"	34°06'15"	33°25'05"	42°45'00"
	128°47'10"	126°34'05"	128°49'30"	128°13'55"	127°32'03"	127°29'30"	129°03'00"
4	35°01'30"	33°18'30"	34°20'00"	34°07'50"	33°54'45"	33°24'50"	34°08'00"
	128°46'00"	126°08'30"	128°52'00"	128°13'55"	127°21'20"	127°42'55"	129°01'05"
5	35°03'55"	33°18'30"	34°09'00"	33°47'25"	33°42'55"	33°22'60"	34°13'02"
	128°41'20"	126°02'30"	128°54'00"	128°14'25"	127°10'55"	127°55'25"	128°59'30"
6	35°02'15"	33°18'30"		33°47'05"	33°35'40"	33°20'55"	33°58'30"
	128°38'05"	125°56'30"		128°14'10"	127°03'20"	128°09'05"	128°58'12"
7	35°02'15"	33°31'45"		33°40'00"	33°30'25"	33°10'20"	33°48'20"
	128°32'00"	126°32'00"		128°25'00"	126°59'45"	128°12'00"	128°51'55"
8	34°55'20"	33°36'45"		33°52'40"			33°38'50"
	128°33'05"	126°32'00"		128°35'10"			128°47'05"
9	34°49'20"	33°41'45"		33°55'45"			33°28'50"
	128°26'45"	126°32'00"		128°46'10"			128°40'30"
10	34°45'15"	33°48'00"					33°17'55"
	128°26'20"	126°26'00"					128°35'05"
11	34°48'50"	33°27'30"					
	128°22'15"	126°57'15"					
12	34°46'20"	33°27'30"					
	128°19'10"	126°03'15"					
13	34°51'00"	33°27'30"					
	128°16'45"	126°09'15"					

A 선 해양 관측 점 위치 표

Station Positions, Line A

Sta. No.	위 치	Sta. No.	위 치	Sta. No.	위 치	Sta. No.	위 치	Sta. No.	위 치
1	34°44' 38" 128°45' 15"	11	34°26' 40" 128°01' 20"	21	34°18' 45" 127°10' 00"	31	34°07' 45" 127°17' 15"	41	35°20' 00" 129°23' 36"
2	34°38' 50" 128°45' 15"	12	34°20' 30" 128°12' 33"	22	34°15' 30" 126°58' 00"	32	34°14' 05" 127°29' 30"	42	35°28' 20" 129°27' 15"
3	34°31' 50" 128°27' 15"	13	34°22' 40" 128°24' 15"	23	34°10' 25" 126°48' 00"	33		43	35°24' 00" 129°34' 00"
4	34°33' 05" 128°15' 20"	14	34°25' 05" 128°36' 05"	24	34°05' 10" 126°38' 00"	34	35°01' 27" 129°07' 13"	44	35°17' 30" 129°43' 45"
5	34°41' 40" 128°08' 55"	15	34°46' 42" 128°45' 05"	25	33°57' 45" 126°28' 25"	35	34°57' 37" 129°11' 20"	43	35°11' 00" 129°52' 50"
6	34°36' 30" 127°58' 45"	16	34°38' 13" 128°54' 15"	26	33°56' 10" 126°21' 45"	36	34°53' 50" 129°15' 20"	46	35°04' 50" 130°02' 15"
7	34°34' 00" 127°46' 45"	17	34°47' 55" 128°56' 35"	27	33°51' 30" 126°34' 50"	37	34°50' 12" 129°19' 30"	47	35°04' 50" 129°49' 00"
8	34°27' 30" 127°37' 40"	18	34°54' 18" 129°02' 20"	28	33°56' 40" 126°45' 20"	38	34°46' 18" 129°23' 36"	48	35°04' 50" 129°34' 00"
9	34°27' 55" 127°40' 40"	19	34°24' 30" 127°32' 40"	29	34°01' 50" 126°55' 30"	39	34°57' 20" 129°23' 31"	49	35°04' 50" 129°20' 00"
10	34°24' 10" 127°49' 33"	20	34°21' 00" 127°21' 15"	30	34°06' 55" 127°05' 45"	40	35°09' 00" 129°23' 36"	50	

A. S 선 해양 관측 성적

Oceanographic Data, Line S

[illegible]

March~April 1964					② September 1964					
A ₂₆	A ₂₈	A ₂₉	A ₃₀	A ₃₁	A ₃₄	A ₃₅	A ₃₆	A ₃₇	A ₃₈	A ₃₉
30	Apr. 1	1	1	1	8	8	8	8	8	8
1540	0900	1045	1115	1345	0830	0940	1035	1140	1300	1420
12.5	12.5	13.5	14.0	13.2	27.6	27.7	28.5	28.0	27.2	27.6
12.4	12.5	12.4	13.6	13.0	26.2	27.5	28.2	27.3	25.8	27.2
12.3	12.3	12.3	13.4	12.7	21.7	25.6	27.2	27.0	25.2	26.0
—	12.1	12.2	13.2	12.6	16.9	15.2	16.3	17.3	17.2	17.0
—	—	—	—	—	11.7	9.5	11.7	14.6	16.2	14.6
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	34.81	30.61	—	—	32.83	34.40
—	—	—	—	—	33.04	31.51	30.87	31.60	33.04	30.90
—	—	—	—	—	34.00	32.86	32.32	32.70	32.21	32.68
—	—	—	—	—	34.13	34.24	—	33.86	32.65	34.11
—	—	—	—	—	34.24	34.89	34.49	34.69	34.60	34.65
—	—	—	—	—	—	—	—	—	—	—
31.0	73.2	53	65.0	63.0	80	100	100	100	70	100
9.0	9.0	12	12	8.0	15	17	21	20	18	16
—	—	—	—	—	—	—	—	—	—	—
2	4	5	4	4	2	2	2	2	2	2
M	B	B	B	B	1	1	1	1	1	1
15.1	15.2	15.1	15.6	15.4	25.5	28.0	30.6	32.0	31.8	28.7
—	—	—	—	—	—	—	—	—	—	—
SE.5	SW.6	NW.7	NW.6	NW.5	NE.3	NE.3	NE.3	NE.3	NE.3	NE.3
Cu.9	Cu.10	Cu.10	Cu.10	—	Cu.8	Cu.8	Cu.8	Cu.7	Cu.7	Cu.7
C	C	C	C	F	—	—	—	—	—	—

Date		Septmeber 1964									
Sta. No.		A ₄₀	A ₄₁	A ₄₂	A ₄₃	A ₄₄	A ₄₅	A ₄₆	A ₄₇	A ₄₈	A ₄₉
Day		8	8	9	9	9	9	9	9	9	9
Item	Time	1605	1735	0605	0735	0910	1030	1215	1400	1620	1830
	Z (m)										
T °C	0	27.6	24.3	22.8	24.5	24.8	27.5	27.4	27.2	27.2	—
	10	27.0	23.9	22.0	23.6	24.6	27.2	27.3	27.0	27.2	—
	25	23.4	21.5	18.0	20.9	21.1	26.6	27.0	26.6	26.9	—
	50	16.5	16.1	—	15.3	15.2	17.8	19.0	18.3	21.6	—
	100	9.0	8.6	—	10.1	10.7	14.3	16.1	15.7	16.5	14.6
	Botm.	—	—	14.4	—	—	—	—	—	—	—
S ‰	0	34.27	33.77	32.50	—	—	—	—	—	—	—
	10	31.09	34.36	33.22	—	—	—	—	—	—	—
	25	32.56	32.68	33.21	—	—	—	—	—	—	—
	50	33.15	33.01	—	—	—	—	—	—	—	—
	100	33.86	33.93	—	—	—	—	—	—	—	—
	Botm.	—	—	33.21	—	—	—	—	—	—	—
Depth (m)		100	100	80	100	100	100	100	100	100	100
Secchi (m)		10	12	8	10	11	15	14	12	13	15
Color		—	—	—	—	—	—	—	—	—	—
Sea		4	6	8	10	9	10	7	10	9	9
Swell		1	2	2	2	2	2	2	2	2	2
Air Temp. (°C)		28.6	26.8	21.5	23.2	24.5	26.6	24.5	24.3	23.2	22.5
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		0	0	0	SW.5	SW.5	SW.5	SW.5	NE.6	NE.6	NE.6
Cloud		Cl.9	Cl.9	9	9	9	9	9	10	10	10
Weather		—	—	—	C	C	C	C	C	C	C

C. AJ 선 해양 관측 성적

Oceanographic Data, Line AJ

Date		① April 1964									
Sta. No.		AJ ₁	AJ ₂	AJ ₃	AJ ₄	AJ ₅	AJ ₆	AJ ₇	AJ ₈	AJ ₉	AJ ₁₁
Day		16	16	16	17	17	17	18	18	18	23
Item	Time Z (m)	0900	1000	1000	1600	1700	1800	1800	1100	1100	1300
T C	0	15.5	16.3	17.1	16.0	15.7	15.6	16.5	16.7	16.4	16.6
	10	15.5	15.7	16.1	15.8	15.4	15.6	16.4	15.4	15.8	17.0
	25	15.5	15.4	15.8	—	15.4	15.4	—	15.7	15.5	—
	50	15.4	15.3	15.1	—	15.4	15.2	—	15.3	14.7	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	15.0	15.2	14.9	15.5	15.3	14.9	16.4	14.9	14.6	16.4
S ‰	0	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	—	—	—	—	—
Depth (m)		78	110	107	30	85	103	19	129	114	29
Secchi (m)		12	11	8	105	10	10	13	12	12	13
Color		—	—	—	—	—	—	—	—	—	—
Sea		—	—	—	—	—	—	—	—	—	—
Swell		—	—	—	—	—	—	—	—	—	—
Air Temp. (°C)		17	17.8	20.4	19.6	17.5	17.0	18.5	18.6	17.6	15.3
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		E. 2	SE. 1	SE. 1	SE. 3	SE. 3	SE. 4	NE. 1	NE. 1	NE. 2	E. 5
Cloud		Ns. 10	Ns. 10	Ns. 10	St. 8	Ns. 10	Ns. 10	Sc. 4	Sc. 4	Sc. 7	Sc. 8
Weather		C	C	C	C	C	C	BC	BC	BC	C

Date		② May 1964									
Sta. No.		AJ ₁	AJ ₂	AJ ₃	AJ ₄	AJ ₅	AJ ₆	AJ ₇	AJ ₈	AJ ₉	AJ ₁₁
Day		6	6	6	7	7	7	9	9	9	10
Item	Time Z(m)	0500	0600	0700	1200	1300	1400	0800	0900	1000	1100
T °C	0	18.0	17.9	18.2	17.4	17.1	17.0	17.1	17.6	18.4	18.0
	10	17.6	17.8	18.1	17.2	16.4	16.9	16.8	17.3	17.2	17.2
	25	17.0	17.7	17.3	—	16.1	16.8	—	17.1	16.4	—
	50	15.9	17.4	17.3	—	16.0	16.1	—	15.5	15.4	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	15.8	15.9	15.4	17.1	14.9	14.8	16.8	14.4	14.2	16.8
S ‰	0	34.76	34.56	34.60	34.63	34.25	34.22	34.38	34.51	34.45	34.47
	10	34.63	34.60	34.63	34.45	34.25	34.22	34.43	34.45	34.31	34.49
	25	34.63	34.60	34.70	—	34.20	34.24	—	34.45	34.42	—
	50	34.56	34.63	34.67	—	34.29	34.60	—	34.49	34.43	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	34.49	34.70	34.63	34.42	34.31	34.45	34.43	34.60	34.51	34.58
Depth (m)		85	110	113	29	83	98	22	128	103	30
Secchi (m)		12	9	11	13	11	10	11	12	16	11
Color		—	—	—	—	—	—	—	—	—	—
Sea		—	—	—	—	—	—	—	—	—	—
Swell		—	—	—	—	—	—	—	—	—	—
Air Temp. (°C)		16.6	18.7	20.3	18.7	18.6	19.4	18.4	18.9	19.7	20.4
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		0	S. 1	SE. 2	N. 2	N. 3	NE. 2	E. 2	E. 2	E. 3	E. 2
Cloud		Cc. 3	Cc. 3	Cc. 4	Cs. 3	Ci. 4	Ci. 3	—	—	—	Cb. 10
Weather		BC	—	BC	BC	BC	BC	B	B	B	C

May		③ June 1964							
AJ ₁₂	AJ ₁₃	AJ ₄	AJ ₅	AJ ₇	AJ ₈	AJ ₉	AJ ₁₁	AJ ₁₂	AJ ₁₃
10	10	24	24	26	26	26	30	30	30
1200	1300	1000	1100	1100	1200	1400	0900	1100	1200
20.2	20.6	19.5	21.2	20.2	21.2	21.3	20.1	20.6	22.2
18.9	18.9	18.8	20.3	19.6	21.2	20.7	19.7	20.2	21.2
18.5	18.4	17.6	17.6	—	20.3	20.6	18.1	19.9	20.7
18.4	18.4	—	15.6	—	17.8	20.2	—	17.7	16.6
—	—	—	—	—	16.7	—	—	—	—
16.2	15.9	17.6	14.7	19.6	—	15.7	17.3	15.1	16.5
—	—	34.24	33.15	33.93	33.40	33.60	33.89	34.09	33.22
—	—	34.42	33.08	33.68	33.64	33.64	34.00	34.11	33.93
—	—	34.74	34.00	—	34.48	33.82	33.77	34.76	33.89
—	—	—	34.74	—	34.18	33.40	—	34.56	34.78
—	—	—	—	—	34.81	—	—	—	34.81
34.65	—	34.81	34.78	34.99	—	34.74	34.70	34.78	—
113	120	29	87	20	126	117	31	118	130
16	15	9	13	10	13	14.5	11	11.5	15
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
20.9	21.9	21.7	21.7	21.7	21.8	21.5	22.4	23.1	23.3
—	—	—	—	—	—	—	—	—	—
E.3	E.3	NE.1	NE.2	S.1	SW.3	SW.4	SE.2	SE.3	SE.3
Cs.9	Cs.9	Sc.10	Sc.10	Sc.10	Sc.10	Sc.10	Sc.9	Sc.8	Sc.10
C	—	C	C	C	C	C	C	C	C

Date		④ July 1964							⑤ July 1964		
Sta. No.		AJ ₁	AJ ₂	AJ ₁	AJ ₂	AJ ₃	AJ ₄	AJ ₅	AJ ₁₁	AJ ₁₂	AJ ₁₁
Day		1	2	24	24	24	20	20	25	25	23
Item	Time Z(m)	1500	1600	1000	1100	1200	1200	1300	1600	1700	1100
T °C	0	21.7	21.7	25.8	27.7	27.8	23.7	24.2	22.8	23.5	23.2
	10	20.9	20.9	24.3	23.5	26.0	23.1	23.8	22.0	22.2	22.0
	25	20.9	20.9	21.1	20.5	17.8	—	21.1	21.3	18.8	—
	50	17.2	17.2	16.5	15.9	15.8	—	14.8	—	17.8	—
	100	—	—	—	14.5	14.3	—	—	—	16.3	—
	Botm.	15.9	15.3	15.1	—	—	22.5	14.5	20.7	—	19.8
S ‰	0	33.53	32.02	—	—	—	—	—	31.98	32.16	—
	10	33.75	33.31	—	—	—	—	—	32.16	32.00	—
	25	33.75	34.09	—	—	—	—	—	32.20	—	—
	50	34.61	34.29	—	—	—	—	—	—	32.00	—
	100	—	—	—	—	—	—	—	—	33.40	—
	Botm.	34.78	33.77	—	—	—	—	—	32.50	—	—
Depth (m)		78	112	79	114	106	29	90	32	118	29
Secchi (m)		6	9.5	12	14	13.5	11	12	10	8	13
Color		—	—	—	—	—	—	—	—	—	—
Sea		—	—	—	—	—	—	—	—	—	—
Swell		—	—	—	—	—	—	—	—	—	—
Air Temp. (°C)		25.2	25.3	27.3	28.2	27.9	26.7	27.0	23.6	23.0	28.3
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		SW.2	SW.2	SW.1	SW.1	SW.2	NE.3	NE.4	NW.4	NW.5	S.2
Cloud		Cc.10	Cc.10	Cu.3	Cu.3	Cc.4	Cu.3	Cu.2	Ns.1	Ns.1	Cc.2
Weather		C	C	BC	BC	BC	BC	B	B	B	B

		⑥ September 1964							
AJ ₁₂	AJ ₁₃	AJ ₁	AJ ₂	AJ ₃	AJ ₄	AJ ₅	AJ ₇	AJ ₈	AJ ₉
23	23	19	19	19	21	21	24	24	24
1200	1300	1400	1500	1600	1300	1400	1700	1800	1900
26.2	26.7	27.1	26.9	27.5	23.8	24.7	21.3	20.4	20.0
24.8	25.9	25.0	25.3	26.0	21.8	24.0	20.8	20.4	—
20.9	19.5	18.0	19.8	17.0	—	16.8	—	19.8	19.4
17.8	16.9	15.8	16.4	15.6	—	14.3	—	18.6	19.3
—	—	—	—	—	—	—	—	14.2	13.9
14.7	15.0	—	15.2	14.4	21.0	13.5	20.7	—	—
—	—	29.69	29.33	29.89	30.90	30.54	32.32	—	32.02
—	—	31.24	31.58	30.37	31.76	30.77	32.16	32.16	—
—	—	33.80	33.15	32.09	—	32.66	—	32.32	32.43
—	—	34.07	34.09	—	—	33.93	—	32.52	32.30
—	—	—	—	—	—	—	—	34.20	—
—	—	—	34.47	33.93	31.97	34.16	32.18	—	—
116	130	85	105	107	29	88	20	128	120
13	14	10	10	14	9	10	6	8.5	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
28.7	28.6	25.3	25.5	25.4	24.0	24.0	21.8	21.5	21.0
—	—	—	—	—	—	—	—	—	—
S. 3	SW. 4	E. 2	E. 2	E. 2	N. 4	N. 5	NW. 1	NW. 3	NW. 3
Cu. 3	Cc. 3	Cc. 10	Cc. 10	Cu. 10	Sc. 6	Sc. 7	Sc. 9	Sc. 9	Sc. 9
BC	BC	R	R	R	BC	BC	C	C	C

D. 014 선 해양 관측 성적

Oceanographic Data, Line 014

Date		① September 1964						
Sta. No.		01	02	03	04	05	01	02
Day		25	25	24	24	24	26	26
Item	Time Z(m)	0930	1105	2030	1920	1800	1920	1850
T °C	0	18.70	19.40	19.20	19.90	20.40	15.30	16.60
	10	18.39	19.45	19.55	20.34	20.33	14.95	15.28
	25	17.62	18.38	19.90	20.68	20.04	15.02	14.37
	50	—	16.71	19.39	14.79	14.60	15.06	15.12
	100	—	—	—	—	—	—	—
	Botm.	13.90	13.34	14.85	14.38	14.42	15.04	15.31
S ‰	0	33.33	33.48	33.64	33.04	32.59	33.69	33.26
	10	32.43	32.61	32.32	32.48	32.76	—	33.26
	25	32.94	33.06	32.61	32.88	33.31	33.96	32.45
	50	—	33.36	33.12	34.00	34.09	34.02	34.02
	100	—	—	—	—	—	—	—
	Botm.	33.93	33.95	33.68	34.04	32.32	34.15	34.18
Depth (m)		62	74	90	105	108	58	73
Secchi (m)		15	16	—	—	15	—	—
Color		—	—	—	—	—	—	—
Sea		3	3	3	3	3	4	2
Swell		3	3	3	3	3	2	2
Air Temp. (°C)		16.7	17.7	17.4	17.4	18.6	14.3	15.4
Baro. (mm)		—	—	—	—	—	—	—
Wind		NE. 4	NE. 4	NE. 4	NE. 3	NE. 4	N. 5	N. 3
Cloud		Cl. 6	Cl. 3	Cl. 2	Cl. 2	Cl. 2	0	Cl. 2
Weather		BC	BC	B	B	B	B	B

② November 1964			③ December 1964				
03	04	05	01	02	03	04	05
26	26	26	23	23	22	22	22
1800	1645	1520	0402	0530	0710	0853	1020
16.40	16.00	16.70	12.30	14.70	14.60	15.00	15.90
15.90	15.84	16.08	12.89	14.31	14.12	14.13	15.52
15.70	15.61	16.24	12.88	14.33	13.91	14.12	15.42
15.32	17.49	18.48	—	14.27	13.93	12.95	13.10
—	—	—	—	—	—	—	—
15.17	17.55	18.33	12.90	14.15	13.91	12.38	12.67
33.24	33.26	33.31	—	—	—	—	—
33.26	33.29	33.33	—	—	—	—	—
33.44	33.06	33.33	—	—	—	—	—
33.78	34.07	33.44	—	—	—	—	—
—	—	—	—	—	—	—	—
34.04	34.05	34.18	—	—	—	—	—
78	105	110	53	75	65	104	105
—	15	14	—	—	8	9	—
—	—	—	—	—	—	—	—
3	3	4	3	3	3	3	3
3	3	3	3	3	1	2	2
15.7	16.0	16.7	15.2	16.6	15.3	15.6	15.7
—	—	—	—	—	—	—	—
N.3	NW.4	NW.4	NE.5	NE.4	NE.3	NE.3	E.4
Cl.3	Cl.3	Cl.2	—	—	Ns.9	Cl.8	Cl.10
B	BC	B	R	R	R	C	C

E. 015 선 해양 관측 성적 Oceanographic Data, Line 015

Date		① September 1964									
Sta. No.		01	02	03	04	05	06	07	08	01	02
Day		24	24	24	24	24	24	24	24	25	26
Item	Time Z(m)	0650	0735	0850	1000	1220	1345	1515	1630	1450	0700
T °C	0	19.70	20.10	20.30	20.20	20.30	20.40	20.20	20.20	15.20	14.70
	10	19.49	20.20	20.00	20.10	20.14	20.41	20.45	20.34	14.67	14.62
	25	19.53	20.12	20.11	20.00	20.34	21.45	20.55	20.49	14.60	14.72
	50	—	—	20.50	16.90	17.09	21.10	14.64	14.54	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	20.05	19.94	14.42	14.94	14.50	15.04	14.91	14.55	14.28	14.89
S ‰	0	34.15	32.70	32.34	32.74	32.70	33.06	33.42	32.95	32.89	32.21
	10	32.82	32.20	32.16	32.36	32.52	32.76	32.81	32.59	32.91	33.21
	25	32.21	32.25	32.16	32.45	32.61	33.24	32.83	32.94	33.04	33.22
	50	—	—	32.27	32.28	33.21	33.68	33.57	34.02	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	—	32.21	32.29	34.18	34.07	33.86	34.15	34.02	33.04	33.26
Depth (m)		48	53	85	91	105	108	103	106	50	50
Secchi (m)		10	9	18	17	19	21	16	17	8	8
Color		—	—	—	—	—	—	—	—	—	—
Sea		3	3	3	3	4	4	4	3	2	2
Swell		1	1	2	2	3	3	3	3	1	2
Air Temp. (°C)		16.7	16.7	16.80	16.0	17.0	16.9	15.7	17.7	12.2	11.7
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		NE. 4	NE. 4	NE. 4	NE. 4	NE. 5	NE. 5	NE. 5	NE. 4	NW. 4	NW. 3
Cloud		Cl. 3	Cl. 3	Cl. 2	Cl. 2	Cl. 1	Cl. 2	Cl. 2	Cl. 2	—	Cl. 2
Weather		BC	BC	B	B	B	B	B	B	B	B

② November 1964					③ December 1964						
03	04	05	06	07	01	02	03	04	05	06	07
26	26	26	26	26	22	22	22	22	22	22	22
0810	0920	1030	1200	1320	0740	1820	0930	1040	1200	1320	1435
14.20	14.90	14.60	15.20	16.40	12.30	12.30	12.30	14.80	15.90	15.40	15.80
13.96	14.52	14.12	15.83	15.90	12.00	11.90	12.98	14.17	15.90	15.03	14.83
14.00	14.50	14.63	14.74	15.03	11.98	11.88	12.93	14.42	15.64	15.02	14.83
15.18	16.09	16.59	16.94	16.93	—	—	12.29	13.97	14.43	14.67	14.68
—	—	—	—	—	—	—	—	—	—	—	—
15.14	16.10	16.73	17.01	17.27	12.00	11.60	12.32	14.00	14.00	13.69	12.35
33.29	33.33	33.15	33.12	33.08	—	—	—	—	—	—	—
32.97	33.00	33.04	33.00	33.06	—	—	—	—	—	—	—
32.98	33.17	33.26	33.04	33.09	—	—	—	—	—	—	—
33.00	33.28	34.25	34.09	34.04	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
33.00	33.37	34.36	34.22	34.04	—	—	—	—	—	—	—
50	88	103	103	103	50	52	80	90	102	100	95
9	13	14	13	14	5	4	7	12	—	10	12
—	—	—	—	—	—	—	—	—	—	—	—
3	3	4	4	4	2	2	2	3	3	3	3
2	3	3	3	3	1	1	1	1	1	2	2
13.4	14.9	14.9	14.9	15.4	12.2	12.3	12.6	13.2	13.2	13.7	14.3
—	—	—	—	—	—	—	—	—	—	—	—
NW.3	NW.4	NW.4	NW.4	NW.4	SE.2	SE.2	NE.2	NE.3	E.3	NE.3	E.3
Ci.3	Ci.4	Ci.3	Ci.2	Ci.4	Ci.2	Ci.2	Ci.7	Ci.5	Ci.2	Ci.6	Ci.10
BC	BC	BC	B	BC	B	B	B	BC	B	B	C

F. 016 선 해양 관측 성적 Oceanographic Data, Line 016

Date		① September 1964							
Sta. No.		01	02	03	04	05	06	01	02
Day		21	21	21	20	20	20	20	20
Item	Time Z(m)	1500	1350	1200	1300	1030	0900	1520	1430
T °C	0	20.50	20.50	20.50	20.70	22.50	20.3	15.20	15.00
	10	20.35	20.28	20.38	20.38	22.58	20.14	14.92	14.52
	25	20.42	20.73	20.17	20.27	22.58	20.23	14.70	14.00
	50	—	—	—	15.40	18.88	19.76	—	—
	100	—	—	—	—	—	12.89	—	—
	Botm.	20.43	20.88	14.02	14.53	14.63	12.89	14.67	13.98
S ‰	0	32.07	32.18	32.86	32.74	32.20	32.95	32.72	32.74
	10	31.82	31.82	32.07	32.61	33.84	31.89	32.59	32.61
	25	31.92	32.34	32.29	32.48	33.91	32.50	32.68	32.72
	50	—	—	—	32.77	33.19	32.86	—	—
	100	—	—	—	—	—	33.68	—	—
	Botm.	31.91	32.85	34.00	34.27	34.38	33.84	32.68	32.72
Depth (m)		52	35	53	80	110	120	34	40
Secchi (m)		8	13	17	15	19	18	8	9
Color		—	—	—	—	—	—	—	—
Sea		4	4	4	4	3	3	3	3
Swell		2	2	3	3	3	3	1	1
Air Temp. (°C)		19.5	19.7	19.5	22.2	22.4	21.9	14.2	14.3
Baro. (mm)		—	—	—	—	—	—	—	—
Wind		NE. 5	N. 4	N. 4	NE. 5	NE. 5	NE. 5	W. 2	W. 2
Cloud		Ns. 10	Ns. 10	Ns. 10	Ns. 10	Ns. 8	Ns. 10	Cl. 1	Cl. 1
Weather		C	C	C	C	C	C	B	B

② November 1964				③ December 1964					
03	04	05	06	01	02	03	04	05	06
20	17	17	17	21	21	21	21	21	21
1230	1530	1330	1230	1830	1745	1530	1230	1050	1000
16.20	17.10	17.20	17.00	12.10	12.60	14.80	16.90	17.20	17.50
15.97	17.17	17.10	16.58	11.41	10.09	14.20	16.68	17.03	17.28
15.72	17.73	17.24	16.41	11.07	10.07	14.07	16.60	17.04	17.33
—	14.52	17.82	16.87	—	—	—	16.68	16.98	17.38
—	—	—	14.18	—	—	—	—	—	16.87
15.37	15.98	15.90	14.75	10.90	9.9	14.11	17.22	16.87	16.91
34.22	32.72	33.22	33.24	—	—	—	—	—	—
34.29	32.72	32.98	32.63	—	—	—	—	—	—
34.29	33.39	33.02	32.83	—	—	—	—	—	—
—	32.74	33.06	33.00	—	—	—	—	—	—
—	—	—	33.49	—	—	—	—	—	—
34.31	33.42	33.44	34.02	—	—	—	—	—	—
53	80	108	128	50	42	56	84	100	130
9	13	12	12	—	—	7	18	16	15
—	—	—	—	—	—	—	—	—	—
2	2	3	3	3	3	2	—	2	2
1	1	1	1	1	1	1	1	1	1
14.7	13.7	14.7	14.2	12.2	12.2	14.7	14.7	14.7	14.7
—	—	—	—	—	—	—	—	—	—
W. 2	NE. 2	NE. 2	NE. 2	E. 2	E. 2	NE. 2	N. 3	NW. 3	NW. 3
Ci. 2	Ns. 1	Ns. 2	Ns. 2	Ci. 3	Ci. 3	0	Ci. 4	Ci. 4	Ci. 3
B	B	B	B	BC	BC	B	BC	BC	BC

G. 017 선 해양 관측 성적
Oceanographic Data, Line 017

Date		September 1964	
Sta. No.		04	05
Day		14	14
Item	Time Z (m)	2130	2000
T °C	0	22.6	22.3
	10	22.40	21.98
	25	22.34	21.55
	50	14.17	20.32
	100	14.48	—
	Botm.	14.26	14.27
S ‰	0	31.82	32.50
	10	31.49	32.34
	25	32.32	32.63
	50	33.78	33.59
	100	33.95	—
	Botm.	34.11	34.09
Depth (m)		120	110
Secchi (m)		—	—
Color		—	—
Sea		7	7
Swell		3	
Air Temp. (°C)		21.7	22.2
Baro. (mm)		—	—
Wind		N. 5	N. 5
Cloud		Ci. 3	Ci. 3
Weather		BC	BC

H. 018 선 해양 관측 성적

Oceanographic Data, Line 018

Date		① October 1964					
Sta. No.		01	02	03	04	05	06
Day		14	14	14	14	14	14
Item	Time Z(m)	1430	0530	0645	0830	1017	1200
T °C	0	21.70	21.20	22.50	22.60	22.50	22.50
	10	21.84	20.99	21.85	22.31	21.93	21.15
	25	20.43	19.97	21.80	22.02	21.92	21.22
	50	14.24	16.07	14.52	16.87	16.66	16.67
	100	—	—	—	15.17	16.09	16.06
	Botm.	13.17	14.02	14.11	14.11	15.89	15.91
S ‰	0	31.14	32.34	32.23	32.00	32.16	32.14
	10	32.18	31.82	31.98	32.00	31.98	31.71
	25	32.70	32.41	31.98	32.00	32.02	31.55
	50	34.11	33.57	33.87	33.64	33.30	33.04
	100	—	—	—	33.96	33.93	34.00
	Botm.	34.27	34.20	34.22	34.22	34.05	—
Depth (m)		86	88	92	128	130	130
Secchi (m)		13	15	16	18	20	22
Color		—	—	—	—	—	—
Sea		3	4	4	4	5	6
Swell		2	3	3	3	3	3
Air Temp. (°C)		21.8	20.0	20.1	21.5	22.2	22.5
Baro. (mm)		—	—	—	—	—	—
Wind		SE. 4	N. 3	N. 3	N. 5	N. 6	N. 7
Cloud		Cl. 4	Ns. 6	Ns. 9	Ns. 7	Cl. 7	Cl. 2
Weather		BC	BC	C	BC	BC	B

Date		② December 1964						
Sta. No.		07	08	01	02	03	04	05
Day		14	14	27	27	27	27	27
Item	Time Z (m)	1320	1440	1012	1105	1210	1515	1700
T °C	0	22.70	22.70	13.50	14.32	16.45	16.60	16.40
	10	22.02	22.42	13.44	14.68	16.35	16.29	16.33
	25	21.55	21.60	13.36	14.78	16.45	16.03	15.70
	50	20.97	15.45	13.12	14.28	15.54	15.59	14.56
	100	15.59	15.08	—	—	13.76	12.45	12.62
	Botm.	15.45	14.92	13.04	14.49	—	12.13	10.38
S ‰	0	32.14	32.16	34.09	34.43	34.60	34.60	34.63
	10	31.80	31.74	34.11	34.29	34.63	34.63	34.79
	25	31.80	31.73	34.13	34.29	34.63	34.65	34.67
	50	32.34	33.35	—	34.47	34.49	34.67	34.25
	100	33.93	33.86	—	—	34.18	34.11	33.95
	Botm.	33.91	34.04	34.13	34.31	—	34.20	34.58
Depth (m)		125	125	86	96	98	115	132
Secchi (m)		23	24	5	10	15	14	15
Color		—	—	—	—	—	—	—
Sea		6	7	4	5	5	3	4
Swell		3	3	2	3	3	2	2
Air Temp. (°C)		22.7	22.5	8.7	10.8	10.2	11.5	11.7
Baro. (mm)		—	—	781	780	780	780	780
Wind		N. 7	N. 8	NNE. 3	NNE. 3	NNE. 3	SW. 3	SW. 3
Cloud		Cl. 2	Cl. 3	St. 7	St. 7	St. 10	Cs. 4	Cs. 5
Weather		B	BC	BC	BC	C	BC	BC

I. 남해 해양관측성적 (8월)

Oceanographic Data, South Coast (August)

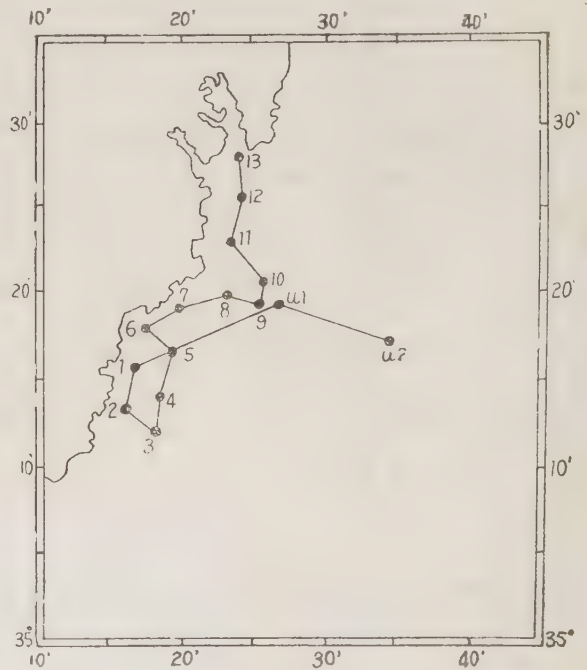
Date		August 1964					
Sta. No.		U ₂ 35°17'30" 129°34'15"	U ₁ 35°19'30" 129°26'45"	1 35°16'00" 129°16'30"	2 35°13'20" 129°15'45"	3 35°12'00" 129°18'00"	4 35°14'15" 129°18'15"
Day		14	14	16	16	16	16
Item	Time Z(m)	2110	2244	0535	0555	0625	0645
T °C	0	26.9	15.2	13.6	16.3	18.7	18.1
	10	18.41	12.98	12.26	12.47	12.33	12.78
	25	14.97	10.99	10.28	10.23	9.21	9.10
	50	14.37	—	—	—	7.28	7.72
	75	11.76	—	—	—	—	—
	100	8.32	—	—	—	—	—
	Botm.	7.52	10.60	9.92	7.36	6.53	7.06
S ‰	0	—	—	34.09	33.62	33.22	33.39
	10	—	—	34.43	34.25	34.27	34.25
	25	—	—	32.65	34.36	34.09	34.27
	50	—	—	—	—	34.29	34.45
	75	—	—	—	—	—	—
	100	—	—	—	—	—	—
	Botm.	—	—	34.29	34.40	34.29	34.38
Depth (m)		—	55	38	50	85	72
Secchi (m)		—	—	4	4	3	3
Color		—	—	5	5	7	7
Sea		2	2	0	0	0	0
Swell		1	1	1	1	1	1
Air Temp. (°C)		27.5	24.5	21.5	21.8	22.5	22.7
Baro. (mm)		772	772	767	767	767	767
Wind		SW. 2	SW. 2	SW. 1	SW. 1	SW. 1	SW. 1
Cloud		Cs. 3	Cs. 2	Cc. 3	Cc. 3	Ac. 3	Ac. 2
Weather		BC	B	BC	BC	BC	B

Date		August 1964					
Sta. No.		5 35°16'40" 129°19'20"	6 35°18'15" 129°17'15"	7 35°19'00" 129°20'00"	8 35°20'00" 129°22'45"	9 35°19'30" 129°25'10"	10 35°20'45" 129°25'30"
Day		16	16	16	16	16	16
Item	Time	0715	0742	0804	0833	0853	0925
	Z (m)						
T °C	0	14.4	14.3	13.8	13.5	13.2	16.9
	10	12.87	11.79	12.21	12.82	14.11	14.05
	25	10.00	9.82	10.50	10.58	11.62	11.30
	50	8.32	—	—	7.66	8.20	10.58
	75	—	—	—	—	—	—
	100	—	—	—	—	—	—
	Botm.	7.53	3.62	7.22	6.73	6.09	6.34
S ‰	0	34.09	34.27	34.27	34.25	34.27	34.27
	10	34.24	34.27	34.27	34.27	34.45	34.27
	25	34.27	34.42	34.36	34.43	34.43	34.43
	50	34.42	—	—	34.43	34.43	34.47
	75	—	—	—	—	—	—
	100	—	—	—	—	—	—
	Botm.	34.52	34.42	34.43	34.27	34.45	34.43
Depth (m)		62	35	45	76	80	80
Secchi (m)		3	2.5	3.5	3	5	3
Color		7	8	7	7	6	9
Sea		0	0	0	0	0	0
Swell		1	1	1	1	1	1
Air Temp. (°C)		21.5	21.5	21.5	21.5	24.3	22.0
Baro. (mm)		767	767	767	767	767	767
Wind		SW. 1	SW. 1	SW. 1	SW. 1	SW. 1	SW. 1
Cloud		Ac. 2	Cs. 4	Cs. 3	Cs. 2	Cs. 2	Cc. 2
Weather		B	BC	BC	B	B	B

August 1964		
11 35°23' 08" 129°23' 15"	12 35°25' 45" 129°23' 45"	13 35°28' 00" 129°24' 00"
16	16	16
0951	1014	1045
15.0	15.3	16.4
14.06	12.92	15.40
—	—	—
—	—	—
—	—	—
—	—	—
11.27	10.67	11.48
34.11	34.42	34.40
34.38	34.43	34.27
—	—	—
—	—	—
—	—	—
—	—	—
34.38	34.43	34.43
20	30	26
2	3	5
9	7	7
0	0	0
0	0	0
22.1	22.6	22.2
767	767	767
SW. 1	SW. 1	SW. 1
Cc. 2	Cc. 1	Ci. 2
B	B	B

해양 관측점 위치도 (8월)

Station Locations, South Coast (August)



J. 남해 해양 관측 성적 (9월)

Oceanographic Data, South Coast (September)

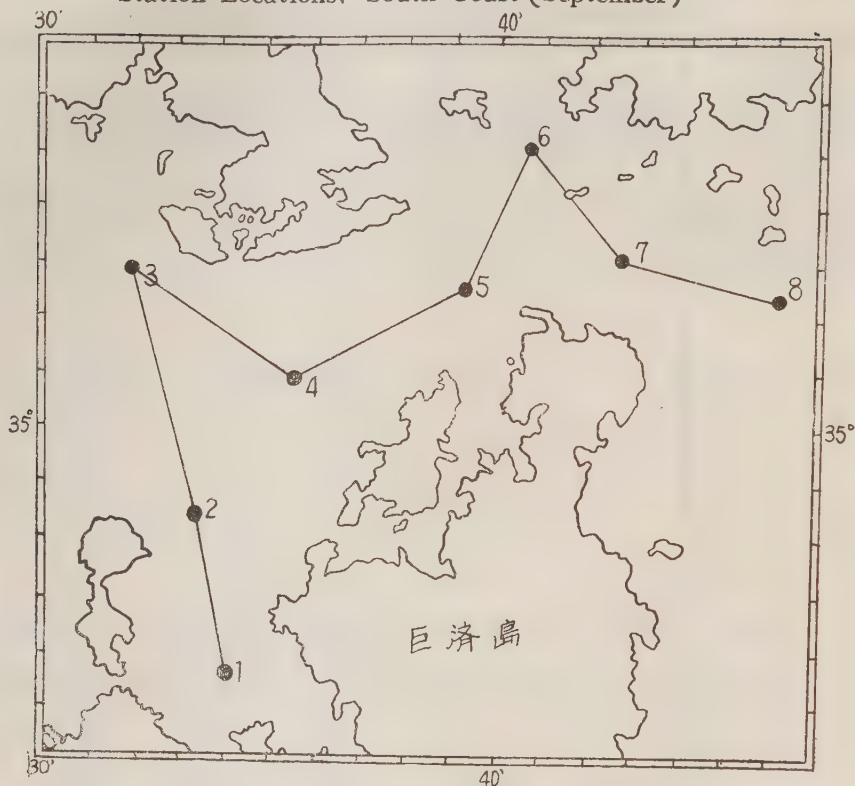
Date		September 1964							
Sta. No.		C ₁ 34°56' 128°34'	C ₂ 34°38' 128°33'	C ₃ 35°03' 128°32'	C ₄ 35°01' 128°35'	C ₅ 35°02' 128°39'	C ₆ 35°05' 128°41'	C ₇ 35°03' 128°43'	C ₈ 35°02' 128°46'
Day		18	19	19	19	19	19	19	19
Item	Time Z(m)	2400	0023	1055	0130	0220	0300	0335	0400
T °C	0	25.80	25.60	25.00	25.22	25.10	24.30	24.30	24.30
	10	25.71	25.46	24.44	24.77	24.67	—	24.08	24.34
	25	—	—	—	—	—	—	23.93	—
	50	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—
	Botm.	25.73	25.56	25.27	25.40	25.61	24.33	22.21	24.23
S ‰	0	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—
	25	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—
	Botm.	—	—	—	—	—	—	—	—
Depth (m)		20	21	16	18	17	10	34	26
Secchi (m)		—	—	1	—	—	—	—	—
Color		—	—	1	—	—	—	—	—
Sea		2	2	2	3	3	3	3	3
Swell		1	1	1	1	1	1	1	1
Air Temp. (°C)		25.0	25.2	25.0	24.8	24.5	24.3	24.3	24.0
Baro. (mm)		772	772	772	772	772	772	772	772
Wind		E. 2	E. 2	E. 3	E. 3	E. 3	E. 2	E. 2	SE. 4
Cloud		St. 10	St. 7	St. 10	Cs. 10	St. 10	Cl. 10	St. 10	St. 10
Weather		R	C	R	R	R	R	R	R

K. 남해 해양관측성적 (12월)

Oceanographic Data, South Coast (December)

Date		December 1964					
Sta. No.		34°52' 00" 128°54' 00"	34°56' 00" 129°10' 00"	35°03' 00" 129°14' 00"	34°40' 00" 128°39' 00"	34°33' 00" 128°31' 00"	34°36' 30" 128°08' 00"
Day		19	20	21	22	23	24
Item	Time Z(m)	1723	1700	1715	1730	1730	1725
T °C	0	16.7	17.8	16.4	12.7	12.4	11.9
	10	16.2	17.7	15.9	12.7	12.4	11.7
	25	14.8	17.7	15.2	12.7	12.4	11.6
	50	—	17.4	14.7	—	12.4	—
	100	—	—	—	—	—	—
	Botm	14.6	16.7	12.8	12.6	12.5	11.6
S ‰	0	34.74	34.78	34.69	34.00	34.07	33.93
	10	34.74	34.81	34.65	34.00	33.93	33.95
	25	34.51	34.81	34.58	34.11	33.96	33.91
	50	—	34.83	34.63	—	33.69	—
	100	—	—	—	—	—	—
	Botm.	34.33	34.67	34.63	34.11	33.93	33.91
Depth (m)		43	86	97	59	76	43
Secchi (m)		10	12	—	—	—	—
Color		—	—	—	—	—	—
Sea		2	2	3	1	1	0
Swell		1	1	1	1	1	0
Air Temp. (°C)		10.8	9.8	9.0	13.6	12.3	14.9
Baro. (mm)		—	—	—	—	—	—
Wind		SW. 2	NW. 2	SW. 3	NE. 2	NE. 1	W. 1
Cloud		Cu. 7	Cc. 7	Cu. 4	Cu. 10	Cs. 3	Ci. 1
Weather		BC	BC	BC	C	BC	B

해양관측점 위치도 (9월)
Station Locations, South Coast (September)



해양관측점 위치도 (12월)
Station Locations, South Coast (December)



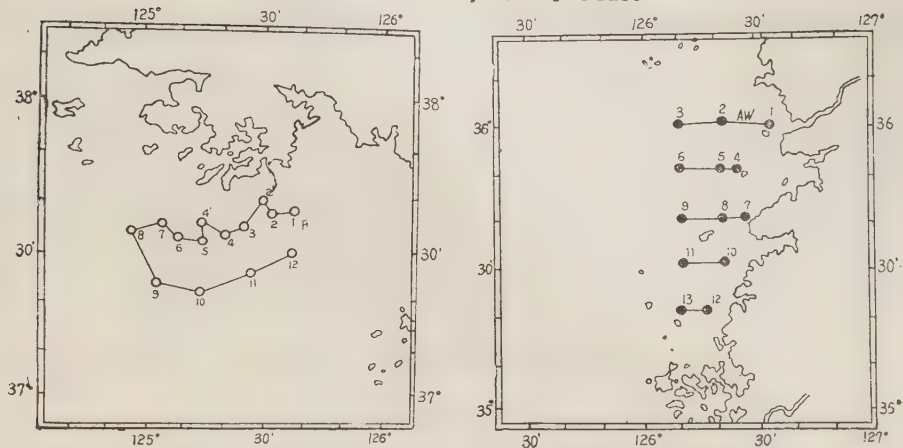
서 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS
WEST COAST

1 9 6 4

서해해양관측점위치도

Station Locations, West Coast



서해해양관측점위치표

Station Positions, West Coast

Line	Station	Lat.	Long.	Line	Station	Lat.	Long.
F	1	37°36' 10"	125°38' 00"	AW	1	36°00' 00"	126°34' 20"
	2	37°36' 30"	125°31' 20"		2	36°00' 00"	126°22' 15"
	3	37°34' 00"	125°25' 20"		3	36°00' 00"	126°10' 15"
	4	37°32' 00"	125°20' 10"		4	35°50' 00"	126°26' 30"
	5	37°30' 00"	125°14' 30"		5	35°50' 00"	126°22' 15"
	6	37°31' 30"	125°08' 50"		6	35°50' 00"	126°10' 15"
	7	37°35' 00"	125°04' 15"		7	35°40' 00"	126°28' 00"
	8	37°32' 30"	124°56' 15"		8	35°40' 00"	126°22' 15"
	9	37°22' 45"	125°02' 40"		9	35°40' 00"	126°10' 15"
	10	37°19' 50"	125°14' 05"		10	35°30' 00"	126°22' 15"
	11	37°24' 05"	125°26' 10"		11	35°30' 00"	125°10' 15"
	12	37°38' 20"	125°36' 10"		12	35°20' 00"	126°17' 15"
	2'	37°29' 40"	125°30' 00"		13	35°20' 00"	126°10' 15"
	4'	37°34' 15"	125°14' 30"				

A. F 선 해양 관측 성적
Oceanographic Data, Line F

[illegible]

Date		② May 1964					③ May 1964				
Sta. No.		F ₉	F ₁₀	F ₁₁	F ₁₂	F ₁₀	F _{1'}	F ₂	F _{2'}	F ₃	F ₄
Day		10	10	10	10	12	15	15	15	15	15
Item	Time Z(m)	1900	2000	2115	2215	1000	0650	0710	0730	0800	0830
T °C	0	11.60	12.20	11.70	12.20	13.70	13.80	13.80	12.70	13.00	12.70
	10	10.70	11.50	—	—	—	—	12.50	12.00	12.20	—
	25	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	6.7	8.4	10.8	11.4	13.1	13.50	12.30	11.80	11.80	11.60
S ‰	0	30.12	28.84	28.66	27.52	—	27.18	28.30	28.66	27.79	28.39
	10	30.08	28.73	—	—	—	—	28.24	29.07	29.60	—
	25	31.83	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	31.91	31.47	28.75	27.79	—	26.80	28.37	29.34	29.38	29.63
Depth (m)		50	30	12	12	12	18	19	26	24	18
Secchi (m)		6	—	—	—	0.5	1	1.5	1.5	1.4	1.2
Color		—	—	—	—	—	—	—	—	—	—
Sea		3	3	3	3	0	0	0	0	0	0
Swell		3	3	3	3	0	1	1	1	1	1
Air Temp. (°C)		11.2	11.5	12.6	12.2	15.2	16.0	16.0	15.7	16.0	16.2
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		NW.3	NW.3	NW.4	NW.3	SE.2	NW.1	NW.1	NW.1	NW.1	NW.1
Cloud		Cs.2	—	—	—	0	Ci.8	Ci.7	Ci.5	Ci.7	Ci.5
Weather		B	B	B	B	B	C	BC	BC	BC	BC

③ May 1964									④ May 1964			
F ₄ '	F ₅	F ₆	F ₇	F ₈	F ₉	F ₁₀	F ₁₁	F ₁₂	F ₁	F ₂	F ₂ '	F ₃
15	15	15	15	15	15	15	15	15	21	21	21	21
0900	0935	1005	1035	1125	1230	1340	1450	1600	0630	0800	0815	0900
12.80	12.00	12.50	12.70	13.80	15.70	12.70	12.60	15.20	14.80	14.70	14.70	14.00
12.60	11.70	11.90	11.40	11.60	12.00	—	—	—	—	—	—	—
—	—	—	11.10	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
11.30	11.60	11.50	11.00	8.50	9.80	9.90	10.10	13.70	14.50	13.80	13.40	13.10
29.27	29.02	29.25	29.74	28.82	29.04	29.11	28.84	29.14	28.12	27.97	27.83	28.31
29.69	29.40	29.33	29.87	29.16	29.81	—	—	—	—	—	—	—
—	—	—	30.19	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
29.69	—	29.65	30.25	30.43	30.68	30.10	—	—	20.71	28.13	28.60	28.95
33	23	30	45	32	32	13	10	10	16	14	13	12
2	2.2	1.1	2	2	2.4	1.5	1.3	1.1	1.5	2.5	3.5	3
—	—	—	—	—	—	—	—	—	—	—	—	—
0	0	0	0	0	0	0	0	0	0	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1
16.0	16.4	16.7	16.7	17.1	17.7	17.2	17.2	17.0	17.0	17.1	17.0	16.4
—	—	—	—	—	—	—	—	—	—	—	—	—
0	0	NW.1	0	NW.1	NW.1	NW.1	NW.1	NW.1	E.1	E.1	E.1	E.1
Cs.3	Ci.3	Ci.5	Ci.3	Ci.3	Ci.2	Ci.2	Ci.2	Ci.1	8	—	—	—
BC	BC	BC	BC	BC	B	B	B	B	C	F	F	F

Date		④ May 1964									
Sta. No.		F ₄	F ₄ '	F ₅	F ₆	F ₇	F ₈	F ₉	F ₁₀	F ₁₁	F ₁₂
Day		21	21	21	21	21	21	21	21	21	21
Item	Time	0935	1015	1055	1125	1200	1300	1450	1550	1700	1800
	Z(m)										
T °C	0	14.70	14.10	15.10	15.10	14.40	13.90	14.00	14.20	14.70	15.20
	10	—	12.30	—	—	11.70	11.10	11.85	—	—	—
	25	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	12.90	12.20	12.10	11.70	11.50	7.45	7.60	12.20	12.80	12.80
S ‰	0	28.06	28.75	28.26	28.48	29.24	29.04	29.22	28.71	28.35	27.61
	10	—	29.90	—	—	30.39	29.99	29.40	—	—	—
	25	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—
	Botm.	29.36	30.03	29.87	30.16	30.39	31.80	31.73	29.20	28.77	28.68
Depth (m)		12	30	15	16	30	32	32	13	12	13
Secchi (m)		2.8	5	6	5.3	7.5	8	7	—	3.5	5
Color		—	—	—	—	—	—	—	—	—	—
Sea		1	1	1	1	1	1	1	1	1	1
Swell		1	1	1	1	1	1	1	1	1	1
Air Temp. (°C)		16.7	17.2	17.2	17.3	17.2	15.2	15.4	15.2	—	—
Baro. (mm)		—	—	—	—	—	—	—	—	—	—
Wind		E. 1	E. 1	NE. 1	N. 1	NE. 1	E. 2	E. 1	E. 1	E. 1	E. 1
Cloud		—	—	—	—	—	Ac. 10	—	—	—	—
Weather		F	F	F	F	F	C	R	R	R	R

B. AW선 해양관측성적

Oceanographic Data, Line AW

Date		① April 1964						
Sta. No.		1	2	3	4	5	6	7
Day		20	20	20	25	25	25	25
Item	Time Z (m)	0845	1010	1138	1420	1630	1820	1950
T C	0	10.7	10.0	9.5	11.1	11.1	9.5	11.9
	10	—	—	9.2	—	10.6	9.5	—
	25	—	—	8.5	—	—	—	—
	Botm.	10.5	9.4	8.0	10.6	10.5	8.5	10.5
Depth (m)		14	15	30	12	20	25	11
Secchi (m)		2.5	3	5	2	3	5	2.1
Air Temp. (°C)		18.5	14.5	13.7	13.4	13.4	10.5	13.5
Wind		S. 3	SE. 3	S. 5	NE. 4	NE. 4	SW. 3	NE. 4
Cloud		As. 8	As. 4	Ns. 8	St. 10	St. 10	Cu. 9	St. 10
Weather		C	B. C	C	C	C	C	R

Date		April 1964						
Sta. No.		8	9	10	11	12	13	11
Day		25	26	26	26	26	26	26
Itme	Time	2113	2220	2345	0150	0318	0554	0718
	Z (m)							
T °C	0	12.0	11.9	14.3	13.0	14.0	12.7	11.9
	10	—	—	—	11.6	—	11.5	11.8
	Botm.	11.5	11.0	12.2	11.1	12.8	11.1	11.5
Depth (m)		12	10	15	20	8	25	13
Secchi (m)		2.5	4.5	4.5	4.5	3	3	3
Color		—	—	—	—	—	—	—
Sea		—	—	—	—	—	—	—
Swell		—	—	—	—	—	—	—
Air Temp. (°C)		13.5	11.5	15.0	15.9	13.5	17.8	10.8
Baro. (mm)		—	—	—	—	—	—	—
Wind		NE. 4	W. 8	NW. 1	NW. 2	NW. 2	NW. 1	SE. 2
Cloud		St. 10	Cu. 8	Cu. 5	St. 10	St. 10	St. 10	St. 10
Weather		R	C	BC	C	C	C	C

Date		② June 1964								
Sta. No.		2	3	5	6	9	10	11	12	13
Day		26	28	28	28	29	29	29	29	29
Item	Time Z (m)	1410	0825	0950	1120	1018	1238	1410	1616	1820
T °C	0	20.1	21.0	19.1	19.1	20.1	22.5	20.2	25.1	20.2
	10	18.0	20.0	18.0	19.0	19.3	—	—	—	—
	25	—	18.0	—	—	—	—	—	—	—
	Botm.	16.7	13.7	17.0	17.0	18.0	21.5	20.2	24.8	20.1
Depth (m)		25	35	25	30	33	8	13	4	14
Secchi (m)		10.5	15.8	2.2	5.5	6	1.2	2.8	0.8	1.5
Air Temp. (°C)		20.5	24.5	20.5	28.0	22.5	23.2	24.3	28.1	28.3
Baro. (mm)		—	—	—	—	—	—	—	—	—
Wind		S. 1	NW. 1	W. 1	NW. 1	NW. 2	SW. 2	NW. 2	NW. 2	NW. 2
Cloud		Sc. 10	As. 1	Cc. 9	Cc. 3	0	St. 10	0	0	0
Weather		C	B	C	BC	B	C	B	B	B

Date		③ July 1964				
Sta. No.		1	4	7	8	9
Day		3	3	3	3	3
Item	Time Z (m)	0845	1038	1316	1450	1638
T °C	0	23.0	23.1	22.5	23.8	24.0
	10	—	—	—	21.0	—
	Botm.	22.7	21.8	21.5	18.0	21.5
Depth (m)		5	18	15	20	14
Secchi (m)		0.7	1.8	1.3	2	—
Sea		—	—	—	—	—
Swell		—	—	—	—	—
Air Temp. (°C)		26.1	23.9	23.2	12.8	24.9
Baro. (mm)		—	—	—	—	—
Wind		S. 1	SW. 2	S. 3	S. 3	S. 1
Cloud		St. 10	St. 10	St. 10	St. 10	Cu. 10
Weather		C	R	R	R	C

Date		④ August 1964					
Sta. No.		1	2	3	4	5	6
Day		13	13	13	1	1	9
Item	Time Z(m)	0913	1045	1218	0810	0926	0826
T C	0	27.1	26.9	26.0	27.2	28.7	27.0
	10	—	—	25.9	25.9	27.8	25.3
	25	—	—	—	—	—	—
	50	—	—	—	—	—	—
	100	—	—	—	—	—	—
	Botm.	26.9	26.9	25.0	26.1	27.9	25.0
S ‰	0	33.42	33.21	33.19	32.95	32.72	33.64
	10	—	—	33.21	33.22	33.22	33.68
	25	—	—	—	—	—	—
	50	—	—	—	—	—	—
	100	—	—	—	—	—	—
	Botm.	33.13	32.74	33.21	33.03	32.66	33.69
Depth (m)		9	19	33	30	30	35
Secchi (m)		1.5	1.7	4	3.4	3	3
Color		—	—	—	—	—	—
Sea		—	—	—	—	—	—
Swell		—	—	—	—	—	—
Air Temp. (°C)		28.0	27.0	26.0	34.0	28.0	27.8
Baro. (mm)		—	—	—	—	—	—
Wind		SW. 2	SW. 2	SW. 3	SW. 1	SW. 1	SW. 2
Cloud		Ac. 2	Ac. 2	Cs. 3	Ns. 4	Ns. 3	Cu. 3
Weather		B	B	BC	BC	BC	BC

부 유 생 물 조 사 포

PLANKTON DATA

1 9 6 4

Month	October					December			
Station	02	04	06	08	10	01	04	07	10
Date	23	23	23	23	23	14	14	14	13
Time	19.50	16.10	12.30	08.05	04.25	13.20	07.00	01.35	19.40
Collected depth	50	50	50	50	150	50	50	50	50
Volume (cc)	5.0	7.0	2.5	6.4	7.0	0.7	2.0	7.5	7.0
Biomass (mg/m ³)	77	73	49.40	91.80	39.80	17.70	38.80	10.90	126.2
Rate of subsample	1/8	1/8	1/8	1/16	1/16	—	1/8	1/16	1/16
No. of total organisms	438	419	517	236	122	355	331	349	356
No. of total the other organisms	—	—	—	—	—	—	—	—	—

ZOOPLANKTON

Labidocera japonica				1					
Acartia clausi				1					
A. erythraea								1	1
A. spinicauda	15	4	9						
A. sp						9	1	3	
A. larvae		2							3
Oithona plumifera	33	32	24	2	3	13	27	31	36
O. nana				2					
O. larvae			2						
Setella gracilis		1			1				
Oncaea venusta	8	62	12	15	95		24	22	19
Corycaeus japonicus	25	20	28	17		50	9	2	7
C. speciosus									2
C. lautus					2				
C. catus							1		
Copepoda larvae	45	43	17	28		53	13	2	9
C. sp					4	7	6	5	1
Euphausia sp							4	2	1
Lucifer hanseni	2		2	1				2	1
L. h. larvae	9	23		2			1		
Gennadus mysis stage	1		1	3					
Nyctihanes australis larvae						6	14		5
Parathemisto sp			3	1			1		4
Sagitta sp	24	24	28	17	3	9	12	17	23
Oikopleura sp	28	15	51	7	1	3	20	26	67
Podon sp						6			
Penilia schmackeri	4	2							
Aglaura sp									7
Conchoecia sp	2					1	5	4	7
Muggiaea sp		2					2		4
							2		4
Doliolum nationalis		2							
Polychaeta sp				3		2	1		3
P. larvae	3	6							
Brachyura larvae		1		1					
Pelagic egg	27	8	2	24	9	109	4	3	12
Fish larvae		1							

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